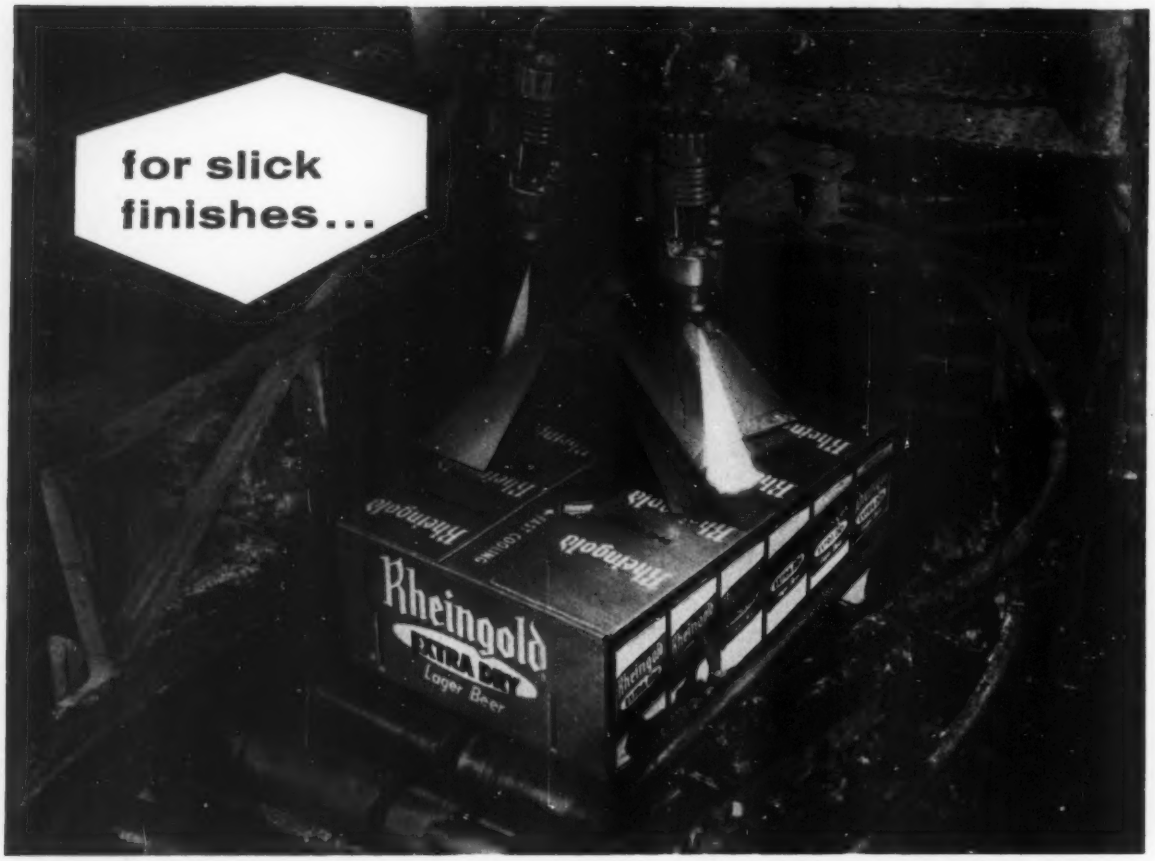
MODERN PACKAGING

PHOTO BY SOMOROFF

Brilliant new kind of package: formed foil | **January 1958**

COMPLETE CONTENTS p. 2

Non-Skid Coating spray set-up at Liebmann Breweries Inc.
Special shields keep the spray off the cans themselves.



an invisible non-skid coating

Attractive gloss-inked cases and bags as well as those with plain smooth finishes have one disadvantage: Surfaces are slick. Stacks of them tend to slip during shipping and handling. This, however, can be prevented. Simply. Inexpensively. With National's RESYN® 32-4150. A synthetic resin emulsion that dries to an invisible non-skid coating.

RESYN 32-4150 imparts an exceptionally high coefficient of friction to container surfaces. An instant drying spray coat—on one side only—is all that's needed to prevent slippage. In no way dulls glossy sales messages. Colorless. Odorless.

RESYN 32-4150 can be spray coated on cases and bags during manufacture or as they pass into delivery conveyors after filling. Write for complete information including equipment and operational suggestions.

RESYNS® National ADHESIVES

NATIONAL STARCH PRODUCTS INC.

270 Madison Avenue, New York 16 • 3641 So. Washtenaw Avenue, Chicago 32 • 735 Battery Street, San Francisco 11

The one case where

Feeling the Film is Knowing the Fabric!

SHEER and soft to touch, VITAFILM is the one transparent packaging film that transmits the *true color* and *true "feel"* of fine fabrics *right through* the package!

Not only pleasing to touch and possessing wonderful contact clarity—this unique Goodyear film doesn't attract dust!

VITAFILM is as rugged as it is glamorous: Customers can paw and poke their way to buying without denting the protection VITAFILM affords fine products.

Prints beautifully, adapts smoothly to high-speed packaging machinery, heat-seals to a welded "won't part" seam, has long shelf-life.

And the cost? Lower than ever in history!

WHY WAIT? Call or write: The Goodyear Packaging Engineer, Packaging Films Dept. M-6418, Akron 16, Ohio.

The greatest thing you can place between you and your customer

Vitafilm by GOODYEAR

The finest in sheer protection

Vitafilm, a Polyvinyl chloride—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

MODERN PACKAGING

87 **Turn of year**
Significant developments of 1957 offer packaging's best guide to progress in 1958.

96 **Foil containers**
Supplier Industry Survey. A new kind of package has come up to a billion units a year.

100 **Design Histories**

102 **Foam-cored shipper**
Rigid, insulating polystyrene foam replaces corrugation in boxes for iced shipment.

104 **Olin makes its own decision**
Can packaging really change the course of a business? Olin takes new identity for its own products.

107 **For better shaves**
Remington's plastic powder-stick container solves a breakage problem, cuts packaging costs.

108 **Packaging Pageant**

114 **Is success good enough?**
Not for Purity Baking. Its latest package redesign boosts sales another 15%.

118 **Display Gallery**

124 **Better film for baked goods**
Bakers lead switch to polymer-coated cellophane for its high resistance and better appearance.

130 **What about polyethylene?** *Second of a series*
The film still isn't ready for high-speed overwrapping. What are materials producers doing about this problem?

Production methods

92 **A new aluminum closure**
Seagram's new cap conceals pre-formed threads, locks in liners and eliminates breakage.

94 **No want of a nail**
Atlas Tack adopts automatic machine to solve the problem of packeting exact counts.

112 **Self-sealing shipper**
Fresno Macaroni carton flaps are pre-printed with cohesive adhesive that sticks only to itself.

116 **Cost-cutting carton coder**
Sealtest uses it to code plant location on carton flap, enabling one printing to serve multi-plant operation.

120 **Hershey solves a problem**
Its chocolate kisses now come in cellophane pouches designed for self-selection stacking.

Technical

137 **Polyethylene-wax coatings**
Functions of low-density polyethylene resins. *By G. S. Peacock, W. H. McKnight and J. M. Austin.*

144 **Questions and Answers**

Departments

41 **Background for packaging.** *Notes, quotes and comments.*

146 **Equipment and materials**
154 **Plants and people**
170 **For your information**
176 **U.S. patents digest**
191 **Manufacturers' literature**
210 **Index to advertisers**

Modern Packaging Executive and Editorial Offices, 575 Madison Avenue, New York 22, N. Y.
Modern Packaging published monthly by Modern Packaging Corp., at Emmett St., Bristol, Conn. Modern Packaging Encyclopedia Issue published as second issue in November by Packaging Catalog Corp. at Emmett St., Bristol, Conn. Second-class mail privilege authorized at Bristol, Conn. Subscription rates (including Modern Packaging Encyclopedia Issue), payable in U.S. currency; In U.S., its possessions, and Canada, 1 year $7, 2 years $12, 3 years $17; all other countries, 1 year $20, 2 years $35, 3 years $50. Single copies 75 cents each (Show Issue, $1; Encyclopedia Issue, $3) in U.S., its possessions, and Canada; all other countries $2 (Show Issue, $2.50; Encyclopedia Issue, $6).

Ⓡ Reg. U.S. Pat. Off.

One BIG way to cut packaging time costs... AUTOMATIC Cartoning with a REDINGTON

If you can turn out more packages per hour, without adding to labor (in fact, often reducing it), your over-all cost per package can drop sharply. Over a run, or a month, or a year, this saving can be mighty important to the P&L statement. And if you are packaging anything in a folding carton, or a small roll, it is a hundred to one that you *can* get that big production boost with the right REDINGTON.

What is more, you'll almost certainly get *better* packages, consistently neat, well-sealed, saleable, with your REDINGTON—and *that* means still more savings, by cutting losses from rejects, returns, spoilage.

There is a REDINGTON automatic machine to package almost any class of cartoned or small roll-wrapped product, from After-Shave Lotion to Zinc Oxide—and do it with the high efficiency that comes from design and construction reflecting nearly six decades of leadership in packaging machinery development and manufacture. You'll find REDINGTONS performing profitably for companies all over the world—smaller-volume producers as well as industry giants.

SINCE 1897

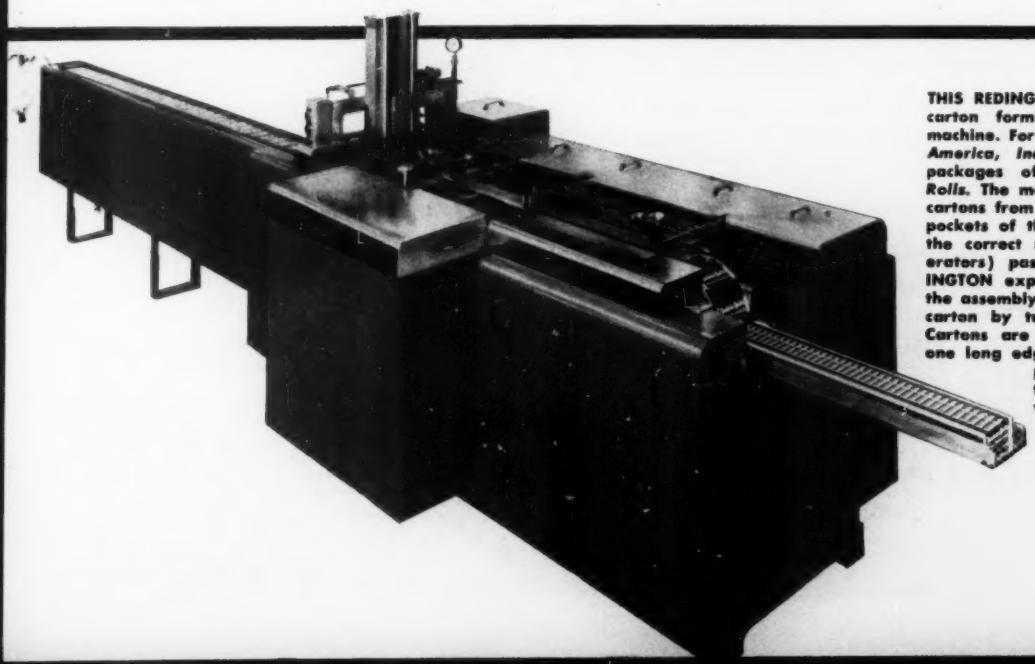
REDINGTON

AUTOMATIC MACHINES for CARTONING
WRAPPING • SPECIAL PACKAGING

Have you ever had the full facts about what REDINGTON Automatic Packaging could do for your production—and profits? Why not call us in right now? New edition of 44-page catalog yours for asking.

F. B. REDINGTON CO., 3010 ST. CHARLES ROAD, BELLWOOD, ILLINOIS . . Chicago Phone: AUstin 7-4200

Verona, New Jersey
CEnter 9-4608



THIS REDINGTON Type 23 is a basic carton forming, filling and closing machine. For *The Sweets Company of America, Inc.*, it handles 10-count packages of their famous *Tootsie Rolls*. The machine feeds flat-stacked cartons from the magazine as loaded pockets of the conveyor (filled with the correct number of rolls by operators) pass the station. The REDINGTON expands the carton, inserts the assembly of rolls, then closes the carton by tucking in the end-flaps. Cartons are discharged standing on one long edge. A special mechanism prevents feeding a carton to an empty conveyor pocket.

Executive and Editorial Offices
575 Madison Ave., New York 22, N. Y.
Telephone: PLaza 9-2710

Chairman of the board
Charles A. Breskin

President and publisher
Alan S. Cole

Editor
Lloyd Stouffer

Senior editor
Pearl Hagens

Managing editor
Thomas M. Jones

Associate editors
Gladys Tarragano
William C. Simms

Engineering editor
Robert J. Kelsey

Technical editor
Charles A. Southwick, Jr.

Midwest editor
Phillip A. Urion (Chicago)

Western States editor
Edmund L. Van Deusen (Los Angeles)

Assistant editor
Roland R. MacBride

Reader service editor
Florence Getter

Advisory editor
C. W. Browne

Patents editor
H. A. Levey

Art director
Donald R. Ruther

Production
Daniel M. Broads, *director*
Bernard J. Farina
Verna Retzlaff

Circulation
Robert Birnbaum, *director*
George Leiz, *subscription manager*

Promotion
Philip W. Muller, *manager*

Treasurer
Beatrice Grove
Gertrude Binger, *assistant*

Business staff
M. A. Olsen, *general manager*
P. H. Backstrom
B. W. Gussow
R. C. Nilson
S. S. Siegel
B. R. Stanton
A. J. Lilienthal

CHICAGO 11, 101 E. Ontario St.
Phone DElaware 7-0060
James M. Connors
William E Kennedy
H. R. Friedman

CLEVELAND 22, 20310 Kinsman Rd.
Phone SKyline 1-6200
Robert C. Beggs

LOS ANGELES 48, 6535 Wilshire Blvd.
Phone OLive 3-3223
James C. Galloway

LONDON S. W. 1, England
Panton House, 25 Haymarket
Phone TRafalgar 3901
T. G. Rowden

FRANKFURT, Germany
Wittelsbacher Allee 60
Phone 46 143/46 372
Georg J. Linder

Cameramen for our covers

Continuing our cover series on the supplying industries, we turn this month to a new type of cover art. Three of America's most distinguished color photographers have been commissioned to create, through their cameras, impressions-in-color of some of the familiar forms of packaging.

Ben Somoroff

Leading off this month, with his view of foil containers, is Ben Somoroff. For this kind of work, Mr. Somoroff has been an award winner in the New York Art Directors Show for nine straight years; last year he walked away with seven awards and two gold medals. He also won the Encyclopaedia Britannica and National Press Photographers Assn. prize for the best color photograph of the year. He has been exhibited at New York's Museum of Modern Art and throughout the world.

Next month we will introduce Rolf Tietgens, a native of Germany, who was trained in Berlin, did documentary film work in Germany and Switzerland, and is now in the top ranks of creative photographers in this country. His work has been exhibited at the Museum of Modern Art, as well as at Princeton University, Phillips Academy and America House. Collections of his photographs on subjects as diverse as the city of Hamburg and the American Indian have been published.

Rolf Tietgens

Stephen Colhoun

The March issue, which will have packaging machinery as its central theme, will bring a striking interpretation by Stephen Colhoun, whose photographs are familiar to the readers of *Mademoiselle* and other leading national magazines. He studied aeronautical engineering and was a U. S. Air Force navigator before turning to photography. He has recently been in Washington photographing President Eisenhower and in Detroit photographing automobiles.

Our greetings to Messrs. Somoroff, Tietgens and Colhoun (each of whom will do four covers during the year) and our confidence that their work will prove as noteworthy as that of their designer-predecessors—Walter Allner, Lester Beall and George Giusti—each of whom won national honors with his MODERN PACKAGING covers.

The Editors

Contents copyrighted 1958 by Modern Packaging Corp. All rights reserved, including the right to reproduce this book or portion thereof in any form. The name Modern Packaging is registered in the U.S. Patent Office. Printed in U.S.A. by Hildreth Press, Inc., Bristol, Conn. Member, Audit Bureau of Circulations. Member, Associated Business Publications. Modern Packaging is regularly indexed in the Industrial Arts Index.

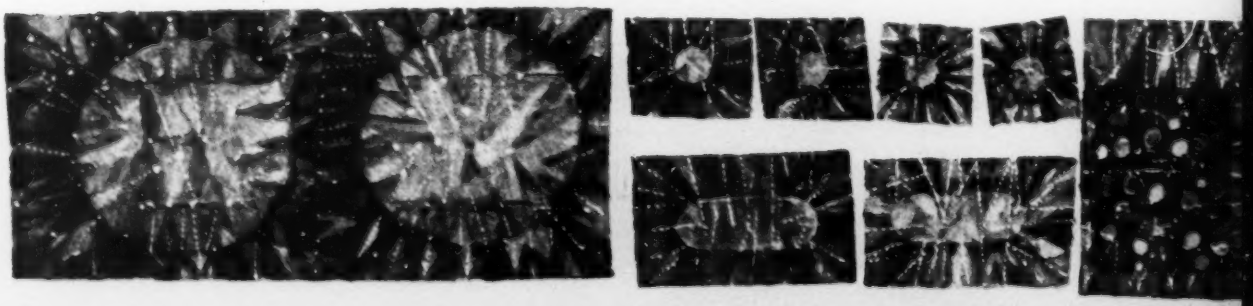
Every user of Lilt Home Permanent finds the neutralizer ready and easy to mix. For the two ingredients which should be kept separate until used, a two-in-one package of Dobeckmun Metalam is utilized. The Metalam package helps achieve product protection, consumer confidence, and a considerable saving for Procter & Gamble.

Packages for performance...

Dobeckmun Metalam® effectively meets the exacting requirements of moisture and light sensitive products such as antibiotics, instant foods and cosmetic lotions. Metalam is a lamination of aluminum foils to plastic films and papers, available plain or colorfully printed to identify, to promote and to attract new customers for your product. This unique Dobeckmun material is proof against moisture, heat and grease, is heat-sealing, nontoxic and durable. It is also economical—performing flawlessly on high speed machines.

From the loading point to the moment of consumer use, your product is packaged for performance by

The Dobeckmun Company, A Division of The Dow Chemical Company, Cleveland 1, Ohio; Berkeley 10, Calif. Offices in most principal cities.



keeping their powder dry with HARCORD paper canisters!

Spray in any direction . . . even upwards to get at underside of foliage . . . with this modern spray gun designed with easy-fill top and anti-clog vent. Sealed, waxed, tamper-proof cylinder provides moisture protection as well as efficient, positive pumping action. Non-curling valve opens wide on back stroke . . . closes snugly on forward motion. Available with a variety of top plugs.

AMMUNITION for insect control is one of the many areas where Harcord packaging plays a big and budget-conscious job . . . because these adaptable paper canisters are so well suited to the insecticide field. Let Harcord engineering "know-how" produce the canister that will economically suit the purpose of your product.

Sears Roebuck & Co. puts many a label on HARCORD containers. This fast-selling cross country *Fruit Spray* uses a square, sturdy shaker can . . . because it stands up well at the counter, in mail order shipment, on the garden shelf. HARCORD quality and competitive price protect the contents . . . and the profits!

Dupont Garden Dust package illustrates the versatility of this Harcord canister. Comes with semi-perforated or plain plug. Metal ends plain or enameled.

you sell it better, you say it best in Paper Canisters by

HARCORD

HARCORD MANUFACTURING CO., INC.
125 Monitor St., Dept. MP-1. Jersey City 4, N. J.
New York Telephone: BArclay 7-5685

Forsman

FOR PACKAGING

Dear Friends:

It is you, our loyal customers, who encouraged the building of our new factory in Fair Lawn, New Jersey. This plant with its increased facilities will enable us to broaden our techniques while continuing the same fine quality.

The founder of our organization, Charles H. Forsman, whose signature Forsman is our trademark, trained his three sons in the art of printing craftsmanship. Now a third generation is with us to carry on the family tradition of manufacturing fine color printing for attractive packaging that will instill confidence in your products.

We invite you to refer back and examine the preceding page. There you may observe new Forscraft printing which is used to obtain the unusual in reproduction. This method along with proven Bronzsheen and Forsmatic Embossing are the tools available to you for enhancing the beauty of your packages.

We wish to thank our fine customers, faithful employees and conscientious suppliers—without whom these achievements would not have been possible.

Faithfully yours,

JOHN H. FORSMAN

President

"The faintest ink is better than the most retentive memory"

C. H. FORSMAN CO., 12 East 57th Street, New York 22, N. Y.

Plant and Business Address: 20-01 POLLITT DRIVE, FAIR LAWN, NEW JERSEY

whatever you **can** . . .

can with CROWN Spra-tainers

For pressurized shaving creams or hair-set lotions—for literally hundreds of cosmetics or personal products for "his" or "her" use—*can* with CROWN Spra-tainers.

Spra-tainers offer the marketer many advantages. Metal guarantees no breakage. Seamless construction is modern design. Full wrap-around lithography lends beauty and high fashion. This means that Spra-tainers actually give your packaged products *extra* sales appeal for faster turnover. Your product deserves the best—call on CROWN for Spra-tainers . . . seamless or fabricated.

Write for your copy of CROWN's new 3rd edition—"GUIDE TO PRESSURE PACKAGING." Crown Cork & Seal Company, Inc., Can Division, 9318 Ashton Road, Philadelphia 36, Pa.

whatever you can . . . call on **CROWN**

CROWN CORK & SEAL COMPANY, INC.

MANUFACTURERS OF CLOSURES, CONTAINERS and MACHINERY

JACK FROST has a reason...

Jack Frost has a new sales booster... a Riegel over-waxed laminated glassine liner that *keeps* brown sugar soft and fluffy. Made extra strong and flexible, the liner unfolds neatly and is a cinch to refold *tightly*. Also used for Jack Frost Verifine sugar... both packaged at high speed on Pneumatic Scale Double Package Maker. The name Riegel stands for product protection always... plus

... flexible packaging materials that are tailored to run at high speeds on automatic machines

... made to your own specifications, printed, waxed, coated and laminated combinations of all types

... packaging materials that are made right, run right, and priced right.

You too may boost sales potential with a special Riegel protective material. For modern packaging that helps bring customers back again and again, write Riegel Paper Corporation, 260 Madison Ave., New York 16, N. Y.

Riegel

PROTECTIVE PACKAGING MATERIALS

P. S.: IMPORTANT PACKAGING NEWS!
Riegel's new Indiana Plant is specializing in the production of PRINTED POLYETHYLENE FILM and Polyethylene extrusions on cellophane and Mylar®.
Your inquiries are invited.

ONE OF THE MANY REASONS FOR DOING BUSINESS WITH NATIONAL CAN

1

NATIONAL CAN *makes one thing*

CANS

...and makes them best!

NATIONAL CAN CORPORATION

CHICAGO
NEW YORK
SAN FRANCISCO

PLANTS
FROM COAST
TO COAST

This package helps the product sell itself

Product visibility is mighty important in selling cheese. So this new jar flares out toward the base, to show more of the colorful product.

At the same time, the label is tilted up to catch the eye. The stable base and handy twist-off cap make stacking and serving easy. And, with all its advantages, this new jar is considerably lighter than the jar formerly used.

Talk with your Armstrong man about your next package. Armstrong Cork Co., Lancaster, Pa.

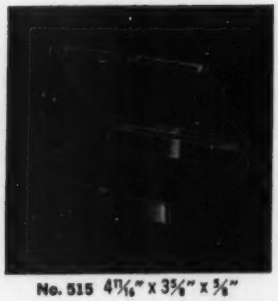
Armstrong PACKAGING

WATCH ARMSTRONG CIRCLE THEATRE EVERY OTHER WEDNESDAY EVENING ON CBS-TV

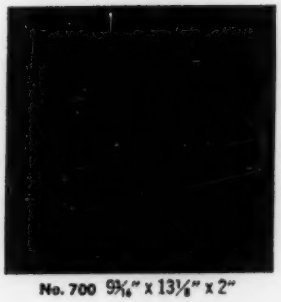
No. 505 4½" x 1 11/16" x ⅜"

No. 14 3 3/16" x 4 15/16" x 1¼"

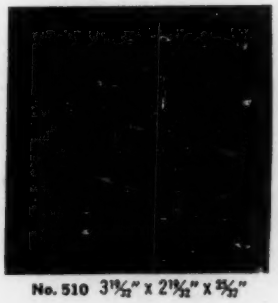
No. 501 2 13/32" x 1¾" x 23/32"



No. 515 4 7/16" x 3⅜" x ⅜"



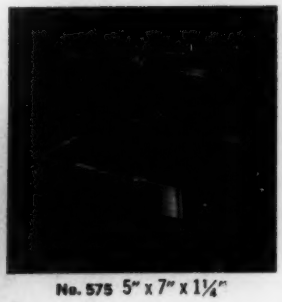
No. 700 9¾" x 13⅛" x 2"



No. 510 3 13/32" x 2 19/32" x 23/32"

No. 600 6 3/16" x 9½" x 1½"

No. 650 6 3/16" x 9½" x 1½"



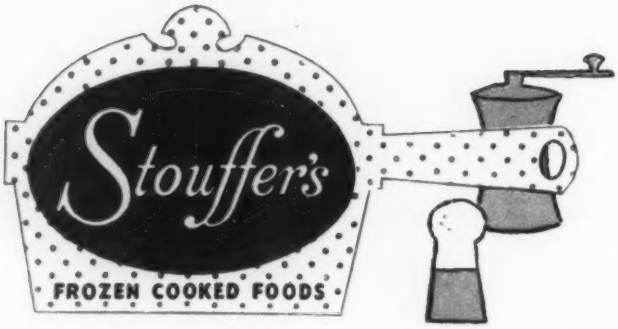
No. 575 5" x 7" x 1¼"

looking for a hinged-lid box?

TRI-STATE is your source for the world's largest assortment of Rigid Plastic Boxes all shapes...sizes...kinds!

TRI-STATE PLASTIC MOLDING CO Henderson 6, Ky., Valley 6-9061

Chicago: 209 S. State Street, Harrison 7-3630



Sell "Family-Style" Foods and "Restaurant-Style" Home Service with

REYNOLDS WRAP ALUMINUM PACKAGING

Homelike quality... that's Stouffer's fame! And to bring that quality *protected all the way from maker to oven to table,* Stouffer's uses Reynolds Wrap Aluminum Packaging... featuring an aluminum heat-and-serve container with foil lined lid.

The housewife can choose from no less than 24 different items on Stouffer's Frozen Foods Menu—truly a restaurant bill of fare. And then, at home, she can enjoy something very like the convenience of restaurant service... for the aluminum container, with its high thermal conductivity and its complete resistance to damage by oven heat, provides the ultimate ease in preparation for the table.

Reynolds packaging service goes all the way from eye-appealing labels to the utmost in protective overwraps, liners and heat-sealed pouches. And it includes a complete line of containers. To see the very latest developments—or to discuss a new solution for your own packaging problem—call the nearest Reynolds sales office. Or write to **Reynolds Metals Company,** General Sales Office, Louisville 1, Kentucky.

QUALITY PROTECTED WITH REYNOLDS WRAP® ALUMINUM PACKAGING

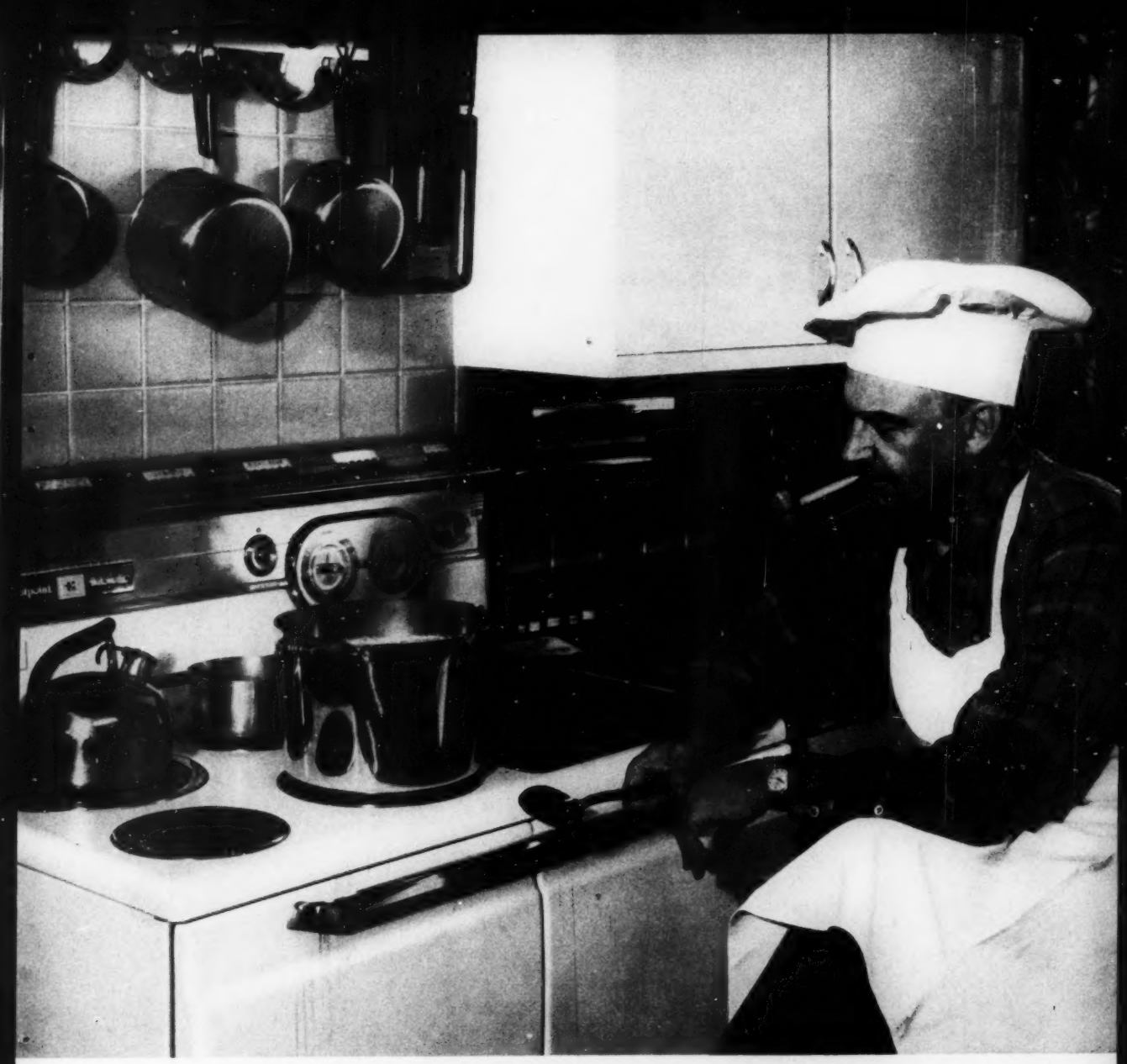
More and More Women Know this Seal... More and More Prefer Products that Carry It!

Recent survey ups the score for identification of the Reynolds Wrap Aluminum Packaging Seal. 8 out of 10 women now know it. 9 out of 10 remember where they saw it. 7 out of 10 say they prefer products carrying it. Powerfully promoted—magazines, network TV, newspapers, spectaculars—and billions of impressions on packages themselves. Use the Seal to boost your sales!

REYNOLDS ALUMINUM

Watch Reynolds all-family television program "Disneyland", ABC-TV.

Stouffer's
FROZEN COOKED FOODS
Escalloped Chicken & Noodles
TWO SERVINGS
NET WT. 11½ OZ.
Cream, Chicken Broth, Chicken Meat, Egg Noodles, Mushrooms, Chicken Fat, Flour, Celery, Salt, Butter, Monosodium Glutamate, Hydrolized Plant Protein.



who put the plastics in Mrs. Gibbs' chowder?

Visit Bob Gibbs at his home in Henderson, and you will most likely be invited to a typically delicious Kentucky dinner – prepared by Bob himself. He takes pride in his culinary efforts, with good reason.

Cooking is Bob Gibbs' favorite art – next to the plastic molding business. Since he developed the first crystal clear injection molded plastic box, over 15 years ago, many of his dynamic new packaging ideas have been inspired by his puttering about the kitchen. For a man around the kitchen gets to know just what a woman wants . . . plastic boxes that package with protection and offer years of diversified reuse.

If you have a new product (anything from macaroni to marbles to machine tools) or, if you need some package modernization, you'd be wise to consult with Bob Gibbs. He'll give you the recipe for the right plastics package in no time – functional, decorative, and undoubtedly consumer-tested. In a kitchen or injection molding plant, Gibbs may not have all the answers – but he sure has a lot of them.

Automation makes Gibbs rigid plastics cost less

GIBBS *Automatic Moulding Corporation*
Henderson 3, Kentucky

IN
KRAFT
PAPER...

KRAFTSMAN IS THE NAME

TO WATCHI

in 1924 Westvaco began production of Kraft paper grades, becoming a pioneer in the industry. Today this Kraft experience totals over a third of a century. Combined with Westvaco's 70-year tradition in papermaking, it's a major reason why Kraft paper users expect and get the highest quality from Westvaco.

in 1937 Westvaco built its first all-Kraft paper mill at Charleston, S. C. In the middle of the great depression, this step was recognized as a bold and imaginative move forward. It was based on an abiding faith in the soundness of the Kraft paper market and in its continued growth potential in the years ahead.

in 1946 Westvaco increased the capacity of the Charleston mill by adding a second machine to meet the growing needs of the Kraft packaging and converting markets. This machine was equipped with new, more precise control equipment, which began to revolutionize the Kraft paper production process. Westvaco has always been a leader in harnessing every new technique to improve quality control.

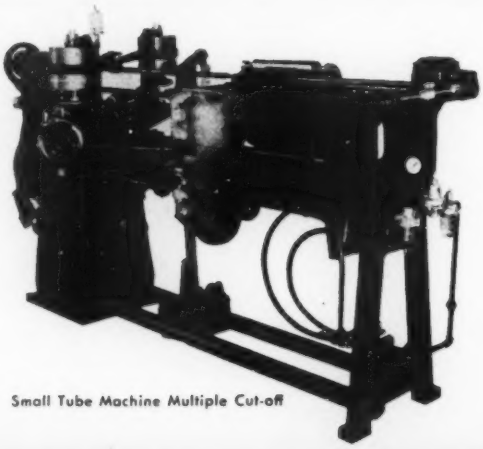
in 1957 Westvaco began Kraft paper production on the newest, most modern machine in the industry. Charleston's No. 3 machine incorporates all the most advanced control devices, including electronics, to produce the highest quality, most uniform Kraft grades on the market. It is the latest Westvaco expression of confidence in the Kraft paper market today *and* tomorrow.

Soon Westvaco's continuing emphasis on research and product development will open the door to Kraft paper products of entirely new dimensions and radically improved characteristics.

To stay fully informed of the newest developments in Kraftsman papers, call your Kraftsman representative at West Virginia Pulp and Paper Company, 230 Park Avenue, New York 17, N.Y.

WEST VIRGINIA PULP AND PAPER COMPANY

Core Recutter



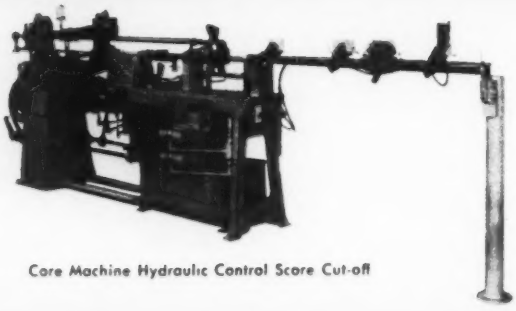
Small Tube Machine Multiple Cut-off

THESE CORE MACHINES ARE DELIVERING

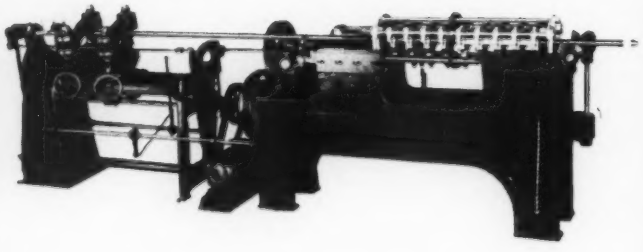
THE PERFORMANCE WE PROMISED.

ASK THE COMPANIES THAT OWN THEM.

Core Printer



Core Machine Hydraulic Control Score Cut-off



Multiple Cut Core Machine

printing presses, rewinders, embossers, folders,
spiral and core machines and special converting machines

PAPER CONVERTING MACHINE COMPANY

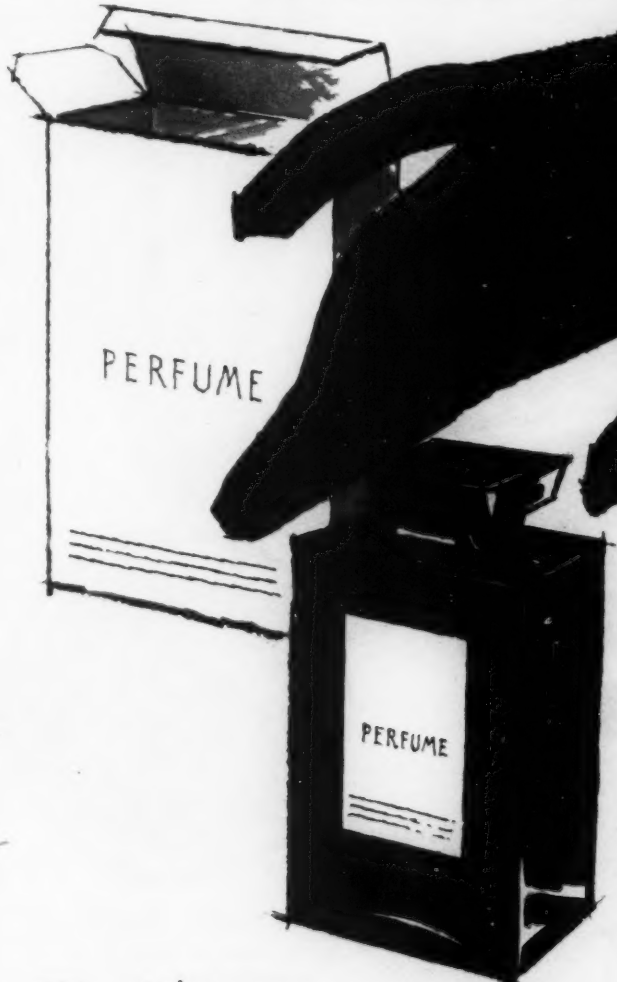
GREEN BAY, WISCONSIN

P C
M C

IC* Paper Coatings Span Every Requirement

Applies Crystal Clear

EVEN ON WHITEST PAPER!



Tear out this page ... **PUT IT TO YOUR OWN TEST!**

At your fingertips is a page coated with outstanding IC-62 Synthetic Paper Coating. Look at the white areas—see what we mean by "crystal-clear transparency." Try to scuff it, scratch it. Immediately you'll know why users across the country rate IC-62 tops!

ℂ 62 SYNTHETIC
PAPER COATING

Make the first impression of your product a sales-sparkling one! Use IC-62 Synthetic Paper Coating for cartons, packages, labels, greeting cards . . . you name it! It won't discolor, won't "tone down" eye-and-buy appeal . . . *even after aging!*

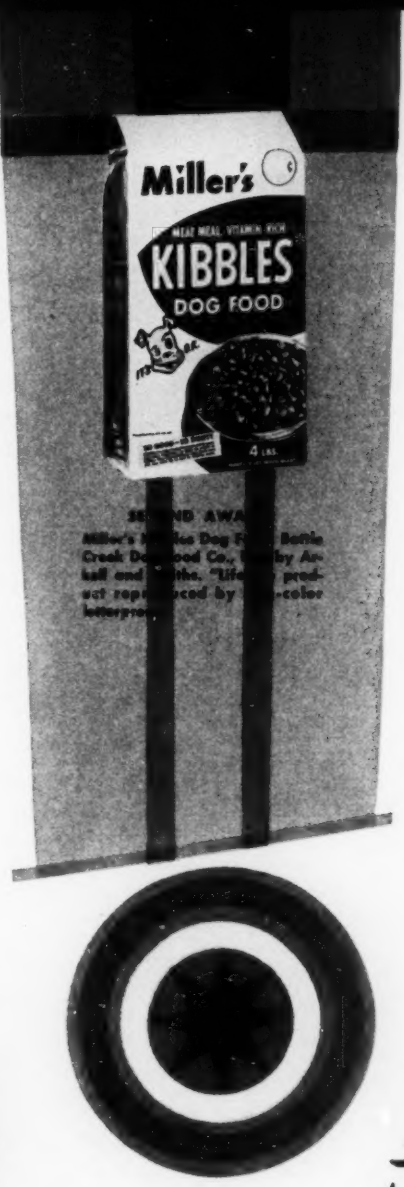
An excellent resistor to handling abuses, IC-62 Synthetic yields a remarkably high gloss with fine fullness. There are other good reasons, too. You'll be pleasantly surprised at the FAST LOW TEMPERATURE CURING cycles and LOW COST. In these categories it surpasses anything in its class.

IC-62 is one of Interchemical's series of specially formulated synthetic coatings to meet your individual needs. Get full details by contacting your IC Paper Coatings Specialist or by writing for the new IC Paper Coating Bulletin.

Interchemical
CORPORATION
Finishes Division

Headquarters Office: 224 McWhorter Street, Newark 5, N.J.

Factories: Chicago, Ill. • Cincinnati, Ohio • Elizabeth, N. J. Los Angeles, Cal. • Newark, N. J. • Mexico City, Mex. In Canada this product is made by Auleraft Paints Limited, Toronto, Ontario and sold under its trademark. **IC is a registered trademark of Interchemical Corporation*



THE WINNING PACKAGES
in the 1957 National
Flexible Packaging Competition
(Paper Bags)

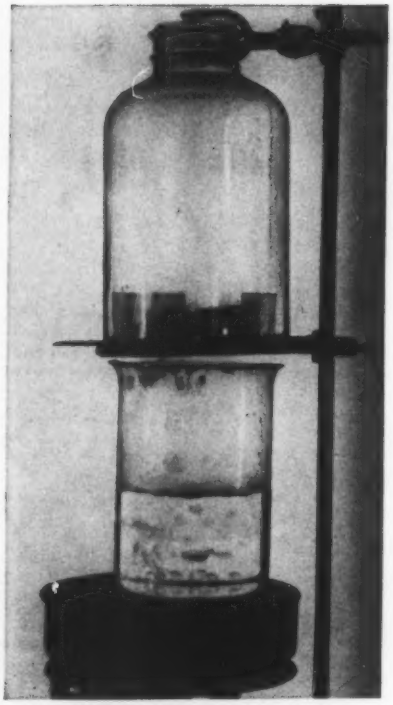
All three top awards swept by NIBROC® White!

Here are the three bags which swept top honors in the Paper Bag Division of the 1957 Flexible Packaging Competition. Last year Nibroc won four of the five awards in this classification!

Nibroc White Gives your package more sales power
Fastest way to give your package a real selling lift is with economical, protective Nibroc White. This brilliantly white heavy duty bag paper—made whitest ever by new "White Magic" bleaching process—is unexcelled for packaging coffee, flour, rice, tea, cake mix, dog food or other products. It provides superior visibility, printability and workability—and is perfect for bag forming, filling and closing machines. For samples and information, write or phone our Paper Sales Division, Dept. DR-1, Boston.

Fiber tear within 5 seconds!
Photo shows how Seban AR-1—carton-sealing adhesive—produces a fast, strong bond. Seban holds, the paper fiber tears. This speed test can be duplicated on actual packaging machinery. Seban grabs in less than 5 seconds, produces a good bond in 12 seconds and tears paper completely within 17 seconds. Choose Seban for fast developed tack, strong bonds.

Seban wins tough sealing tests!



36 minutes in live steam!
This photo shows how Seban AR-5—tube-winding adhesive—resists both heat and moisture in sterilization of paper tubes for surgical products. Steam pouring into bell jar won't produce delamination on tubes sealed with Seban—not even after 36 minutes. Choose Seban for great resistance to heat and moisture!

New line of polyvinyl resin packaging adhesives from Armour

Seban can help you solve your toughest package-sealing problems. Conclusive tests prove Seban meets every packaging need—Cartons—Cases—Window Boxes—Folding Cartons—Tubes—Bags—and more. Seban will help you get increased production and better sealing quality!

Use one of the following machines?

ABC · Dacam	Mor-Can-Pak
Dacamatic	New Jersey
Elliott · Ferguson	Peters
Gar-Pak · Globe	Pneumatic Scale
Hayssen	Post · Potdeven
International	Rockwell · Scandia
Jones · Master	Standard-Knapp
Monitor	Staude

Test the grade of Seban that's right for *your* particular need.

* * *

Don't miss the Seban display in Booth 129—Packaging Machinery and Materials Exposition—Atlantic City, March 25-28, 1958.

ARMOUR ADHESIVE DIVISION

Armour and Company, 1355 W. 31st Street, Chicago 9, Ill.

120 Broadway
New York 5, N. Y.

Delaware and Spring Garden Streets
Philadelphia 23, Pennsylvania

Meta Lane
Lodi, New Jersey

235 South Hamilton Street
High Point, North Carolina

210 pound squeeze!

Revealing photo demonstrates how Sel an AR-2—case-sealing adhesive—withstands extreme pressure.* Compression test proves Seban can take almost any amount of palletizing—more than 200 pounds—and hold, even when the case breaks down. Choose Seban when great bonding strength is important.

**Gauge shows lbs. per square inch on cylinder—equal to 1/7 actual compression between plates.*

MAIL THIS COUPON

SEAL WITH SEBAN FOR SUPERIOR SEALING!

Send for: MP1-58

- ☐ New Seban literature
- ☐ A 5 gal. sample at your quantity price, and data on the grade of Seban best for:
  - ☐ Carton sealing
  - ☐ Folding cartons
  - ☐ Case sealing
  - ☐ Tube winding
  - ☐ Window boxes
  - ☐ Bag sealing

Armour Adhesive Division
1355 West 31st Street • Chicago 9, Illinois

NAME_____

POSITION_____

FIRM_____

CITY_____ STATE_____

SQUARE INCH FOR SQUARE INCH

NEW WOOD THERMOMAT*

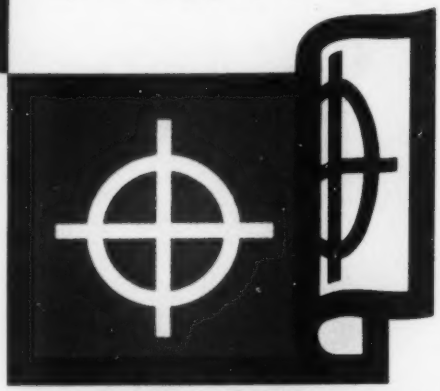
COSTS **40%** LESS . . .
AND PRODUCES **PERFECT**
RUBBER PLATES!

Phone or write for complete details and prompt, efficient service — or contact your nearest representative, expert in the graphic arts.

ONE Wood Thermomat does the job of TWO ordinary sandwich-type matrices and requires NO metal filler. *You save* 40% *on materials alone.*

And because there is ABSOLUTELY NO PROGRESSIVE SHRINKAGE IN THE MATRIX . . . 75% LESS FLOOR VARIATION . . . NO PICKING and NO BLISTERING, you get a perfect rubber plate the first time. (And yes, the *hundredth* time, too!)

This means no remolding problems — and *extra* savings on time and labor.



WOOD FLONG CORPORATION

HOOSICK FALLS, NEW YORK

*Patents Pending

Phone or write for complete details and prompt, efficient service — or contact your nearest representative, expert in the graphic arts.

NEW YORK CITY
Emmett A. McAtee
Sales Manager,
Plastics Division
Wood Flong Corporation
551 Fifth Avenue
New York 17, New York
Telephone Murray Hill 7-2950

William M. Clark, Jr.
Wood Flong Corporation
551 Fifth Avenue
New York 17, New York
Telephone Murray Hill 7-2950

NEW ENGLAND
Raymond J. Finzer
Wood Flong Corporation
Hoosick Falls, New York
Telephone 300

EASTERN DIVISION
Clifford J. Earley
53 Joanicke Lane
Hamden 14, Connecticut
Telephone Locust 2-6384

George J. Meehan
1713 W. Passayunk Avenue
Philadelphia, Pennsylvania
Telephone Howard 7-0926

SOUTH-EAST DIVISION
Wm. A. Wetherell
1431 Northwood Road
So. Jacksonville 7, Florida
Telephone Exbrook 8-2135

MID-WEST DIVISION
C. H. Scherb
2567 South Zenobia
Denver, Colorado
Telephone West 5-9002

J. Wallace Wood, Jr.
7553 Chandler
Jennings 20, Missouri
Telephone (St. Louis)
Colfax 1-0184

Christopher P. Kelly
1606 W. 81st Street
Chicago 20, Illinois
Telephone Vincennes 6-4185

SOUTH-WEST DIVISION
Raymond Sturm
5523 Grand Lake Street
Bellaire, Texas
Telephone (Houston)
Madison 3-7254

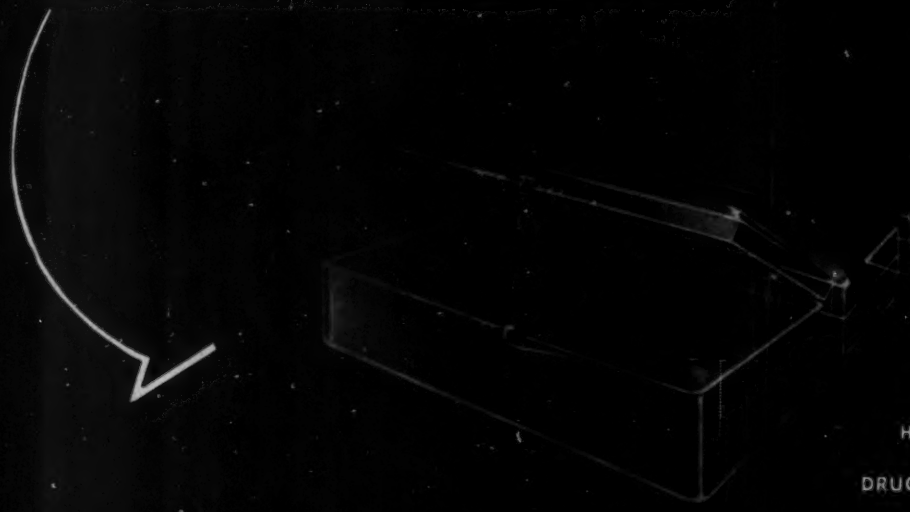
WEST-COAST DIVISION
A. W. Johnston
1635 Westhaven Road
San Marino 9, California
Telephone Atlantic 1-4642

G. J. Wirthman
1848 Magnolia Way
Walnut Creek, California
Telephone (Berkeley)
Yellowstone 4-2180

CANADIAN DIVISION
Wyndham Austin
Wood Flong Corporation
of Canada, Ltd.
4298 St. Catherine Street, W.
Westmount Montreal 6,
P.Q., Canada
Telephone Wilbank 7630

SERVING THE GRAPHIC ARTS INDUSTRY EXCLUSIVELY

Join the packaging PARADE to DIAMOND



NOTIONS
PERFUMES
COSMETICS
OFFICE ITEMS
HARDWARE
JEWELRY
FISHING TACKLE
HOBBY & CRAFT
DRUGS & SUNDRIES

AMERICA'S MOST IMPORTANT MERCHANDISING SOURCES PREFER TO PACKAGE IN DIAMOND PLASTIC BOXES

Today's consumer trend of 'Self-Purchasing' puts the package to the test. Thousands of manufacturers, jobbers and wholesalers have found that rigid, crystal clear Diamond Plastic Boxes, properly designed for the product, give the **self-sellability** needed to win customers at point of sale. Whatever your product, whatever its packaging need, a versatile, practical Diamond Plastic Box will package it best — sell it faster. Let us help you choose your own distinctive package from our wide assortment or design a package for you.

Rigid, hinged plastic boxes of superb quality and workmanship in a wide range of STOCK sizes and colors.

Sparkling display of the packaged product through crystal clear transparency.

Self-Selling packages that command attention, yet offer protection from dust and handling.

Merchandising and remembrance value of the packaged product through high home re-use of rigid plastic boxes.

Versatile, practical, low cost packaging that is quickly adaptable to any packaging program.

Write for sample boxes and price list.

the World's largest assortment of Small Plastic Boxes

P. O. BOX 326 • ROANOKE, VIRGINIA • PHONE DI 3-2456.

SALES OFFICES

NEW YORK CITY
922 Empire State Bldg.
CHickering 4-8892

CHICAGO, ILL.
Suite 364 Wrigley Bldg.
410 N. Michigan Ave.
DElaware 7-6932

LOS ANGELES, CALIF.
205 N. Virgil Ave.
DUnkirk 5-2297

BALTIMORE 16, MD.
4208 Duvall Ave.
MOhawk 4-8506

ST. LOUIS 5, MO.
Arcenon Bldg., Suite 424
S. Bemiston Ave.
PArkview 6-0296

CAMBRIDGE, MASS.
12 Norfolk St.
Kirkland 7-0670

Distributed in Canada by Ellis-Fox Containers, Ltd.

Hamilton new 501 bodymakers are in service at many well-known plants

Installations pictured above, Hershey Chocolate, Hershey, Pa. (top); Sherwin-Williams, Oakland, Calif. (lower left); and Dole Pineapple Honolulu, indicate how leading packers have chosen Hamilton's new 501 Bodymaker to meet can requirements efficiently.

The main feature of Hamilton's new No. 501 Bodymaker is its central drive shaft. This unusual design results in fewer wearing parts and gears and improved accessibility.

Write today for a descriptive bulletin of the world's most complete line of can making machinery.

Hamilton Division Hamilton, Ohio

BALDWIN · LIMA · HAMILTON

Diesel engines • Mechanical and hydraulic presses • Can making machinery • Machine tools

New lower-cost "dripless" can perfect for edible oils...

Canco's **ACCU-POR** container

At last — a container that's just right for edible oils and many other liquid food products . . . a can that offers the user new convenience and neatness . . . a package that gives your product an important sales "extra" at lowest cost!

The Accu-Por container pours freely, accurately, yet won't drip a drop when righted. It is easy to handle, can't break, is light in weight. Because your label is lithographed all around the container, it has great eye-appeal! And remember: Canco offers brilliant metallic finishes . . . precision, full-color lithography.

Accu-Por containers are available in 16-oz. and 32-oz. sizes, priced as much as 25% below comparable cans.

Ask the Canco packaging expert today for further information about this remarkable all-metal container!

COME TO CANCO FIRST !

American Can Company

New York • Chicago • San Francisco

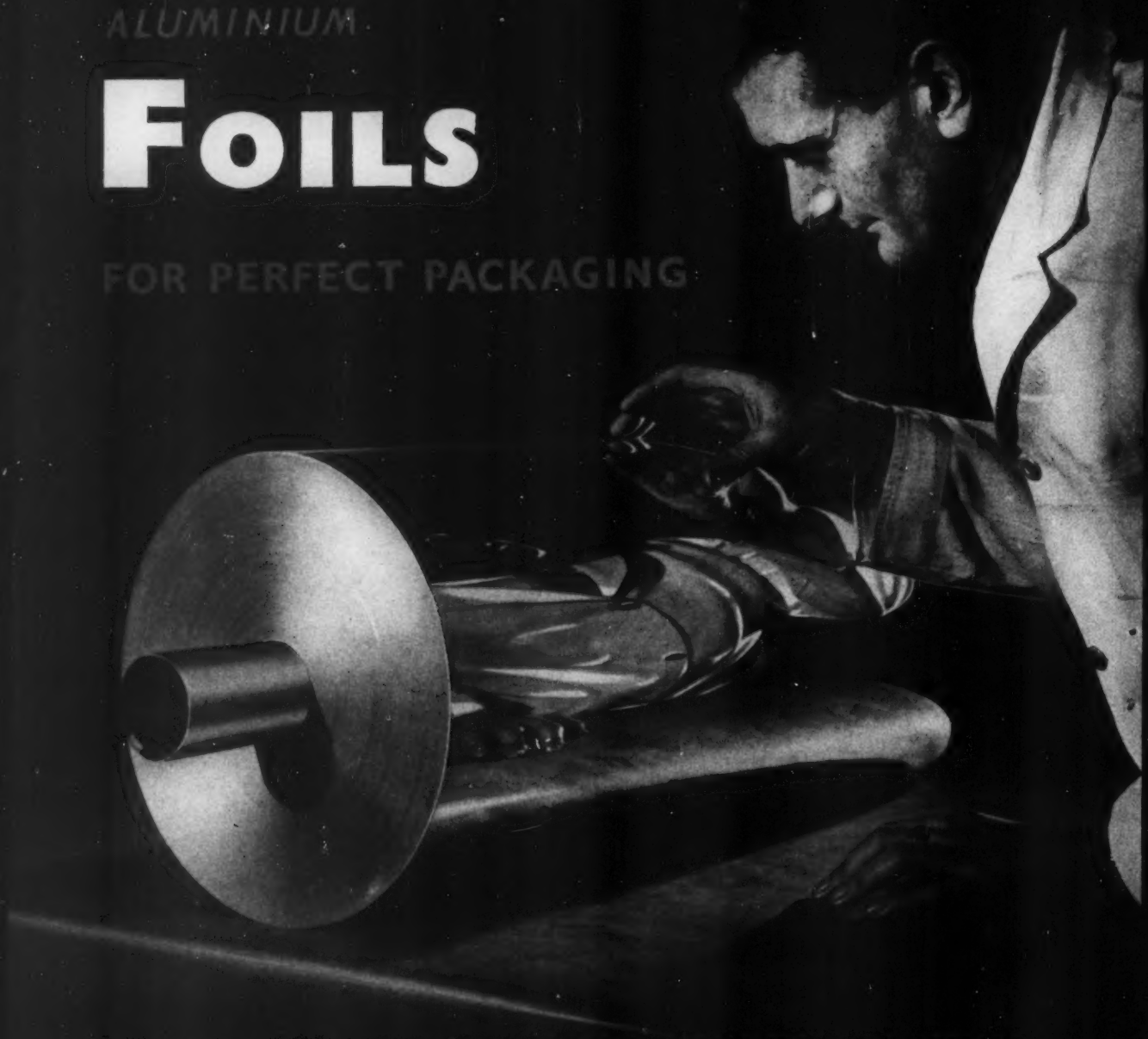
CUSTOM MADE

FISHER'S

ALUMINIUM

FOILS

FOR PERFECT PACKAGING

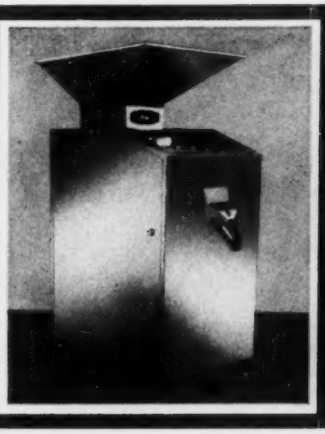


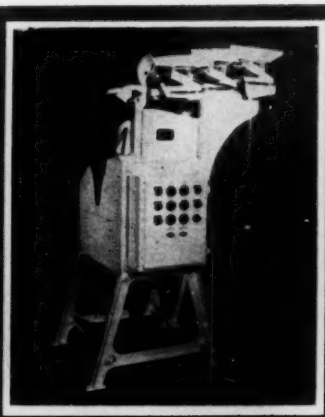
FISHER'S FOILS LIMITED, EXHIBITION GROUNDS, WEMBLEY, MIDDLESEX, ENGLAND

Tel: Wembley 6011 Cables and Grams: Liofnit, Wembley (A.B.C. Code 6th Edition)

WEIGHING FORECAST:

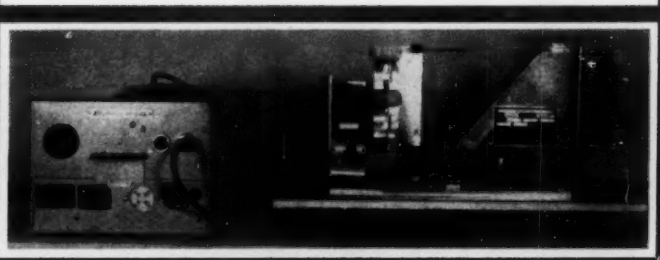
Improved accuracy and speeds with these new, precision Wright weighers.



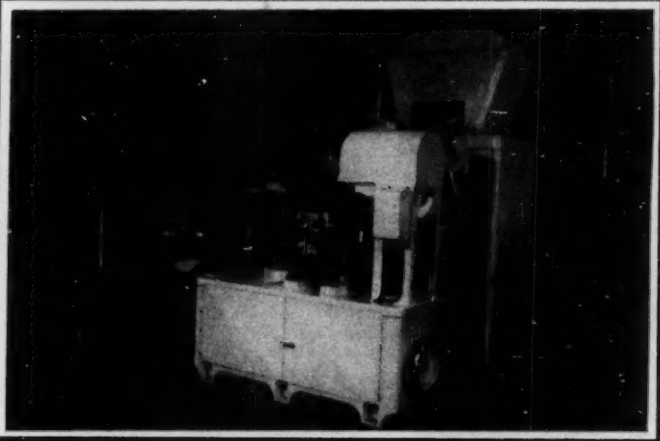


Wright Junior Weigher
Versatile, semi-automatic net weigher. Quick change-over features and precision accuracy for manufacturers packaging a variety of items.

Wright Weigher "M"
Precision net weigher with multiple heads individually fed by bulk-dribble vibrators. Range, one-half to 16 ounces. Candies, cookies, crackers. Semi-automatic or automatic models available.



Wrightronic
Electronic weigher for use in automatic packaging systems. Range from three grams to 50 or more pounds. Provides an accuracy reliability previously unattainable at comparable speeds.



Wright Bagmaster® "C"
Completely automatic system for net weighing and bagging dry products such as potato chips. Range, 2 to 16 ounces.

Other Wright Machines . . .

Wrightwrap: Stacks, wraps, seals, and labels cracker sandwiches at rate of 120 packages per minute.

Strip Stamper: Automatically applies revenue stamps to neck of bottles at rate of 140 per minute.

2SG: Automatically forms the carton, weighs, fills and closes.

Custom-Systems: Designed and manufactured on contract basis to meet specific requirements.

Wrightvac: Jet air-cleaner for removing powdered starch from candy.

LITERATURE UPON REQUEST

WRIGHT MACHINERY COMPANY
DIVISION OF SPERRY RAND CORPORATION
DURHAM, NORTH CAROLINA

DISTRICT OFFICES:
Ridgefield, N. J.; LaGrange, Ill
Dallas, Texas; Durham, N. C.

CANADA:
Sperry Gyroscope Ottawa Limited
Ottawa, Ontario, Canada

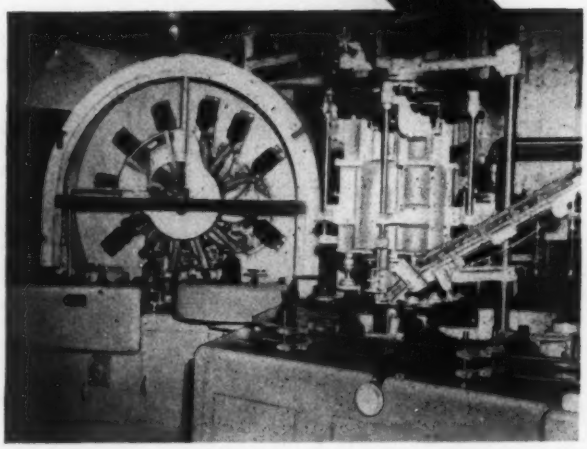
EXPORT DEPARTMENT:
13 East 40th Street, New York 16, N. Y. USA
Cables: ARLAB

AND BOTTLED IN SECONDS BY PNEUMATIC!

Slow is the watchword in the distilling of Canadian Club — one of the reasons why it has become one of the great names in whisky. But, once it is ready to drink, the famous Hiram Walker company makes certain no time is lost in the bottling of it — by using Pneumatic close coupled bottling equipment.

The Hiram Walker people pride themselves on their up-to-date methods and modern efficiency as well as their age old traditions. They would not trust the cleaning, filling and capping of the containers for their choice brands to anything but the most expert mechanical means. They are satisfied they have exactly that in Pneumatic — just as are the majority of cost and efficiency conscious producers of America's leading packaged and bottled goods of all kinds. Look to Pneumatic for "lower cost per container" bottling or packaging in your plant, too.

PNEUMATIC SCALE CORP., LTD., 82 Newport Ave., Quincy 71, Mass. *Also: New York; Chicago; Dallas; Seattle; San Francisco; Los Angeles; Leeds, England. Canadian Division: Delamere & Williams Company, Ltd., Toronto*



Close coupled bottling line in operation at Walkerville, Ontario.

★PNEUMATIC

Packaging and Bottling Equipment

How 3 types of packaging with BAKELITE Brand Plastics provide

Beauty, impact, and protection

1 BAKELITE Brand Styrene Plastic

BEAUTY . . . It takes a beautiful package to sell a "beauty" product. And this "Date" Case compact for Pond's is a beautiful package. It contains their famous "Angel Face" Powder and Foundation-in-one. It's artfully molded from BAKELITE Brand Styrene Plastic and finely decorated with gold. The rich-looking appearance inspires the utmost confidence in the quality of its contents.

Pond's "Date" Case is typical of the packaging excellence possible with BAKELITE Styrene Plastic. This pleasant-to-touch plastic assures all the vivid beauty . . . color and style that are so necessary for competitive selling on crowded counters. Its versatility permits package designs that are only limited by the imagination. So specify a BAKELITE Brand Styrene Plastic for your product. It's the ideal rigid packaging material for scores of products such as foods, beverages, drugs, cosmetics and novelties – products that will have extra sales appeal because of better eye appeal.

Angel Face "Date" Case molded by Cowan Boyden Corp., Providence, Rhode Island

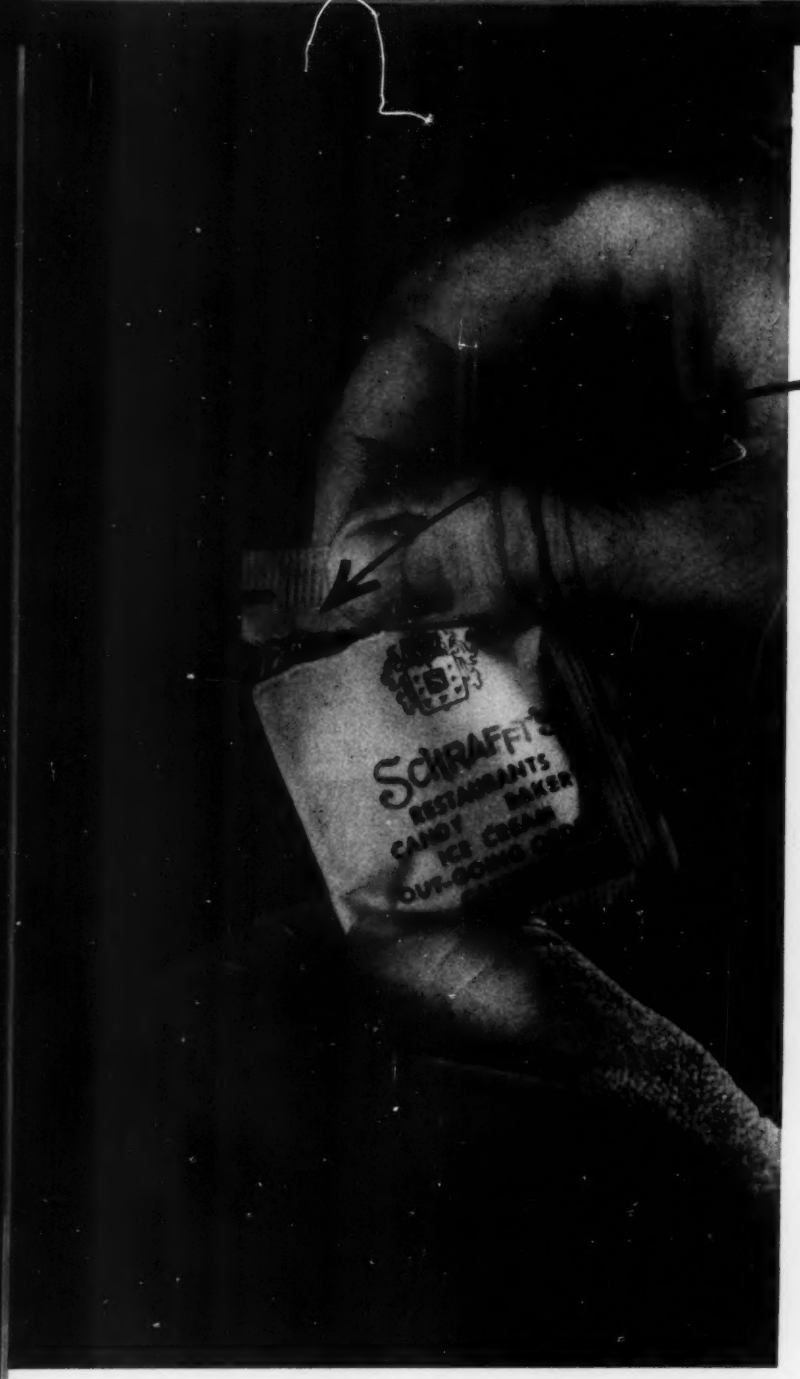
beauty, impact and protection *(continued from preceding page)*

2 KRENE® Cast Vinyl Film . . . made by BAKELITE Company

IMPACT:...Powerful sales impact with "packaging" that enhances product desire and wins the Gold Award in package competition. This striking package features KRENE Cast Vinyl Film and it won the Gold Award for the "Best Toy Package" of 1957 in the contest sponsored by "Variety Store Merchandiser".

When you package with KRENE Cast Vinyl Film, it's easy to see why it is a prize-winning material. Its superb clarity and gloss add an elegance to product quality that sparkles in competitive selling. Its exceptional tear strength assures maximum protection. Your product is safeguarded from dust, damage and soiling from constant handling. Tensile tests prove that KRENE can be elongated up to 300% without rupture. It may be easily fabricated into covers, bags and packages with thicknesses ranging from one to eight mils.

So specify KRENE Cast Vinyl Film ...it's the packaging film to use when "elegance" is just as important as "protection".



3 BAKELITE Brand Polyethylene Coating

PROTECTION . . . Here's a picture of "polyethylene protection in action". . . the type of protection that customers like to see – the extra step that assures greater customer satisfaction.

The polyethylene coating safeguards quality by keeping moisture and contamination away from the sugar. Each packet will empty quickly and completely, eliminating waste.

Coatings based on BAKELITE Brand Polyethylene improve the efficiency of countless packages. Applied to paper, cloth, metal, foil or film – they will improve sales appeal – prevent contamination – add strength and toughness and provide strong heat sealability. Since polyethylene is tasteless, odorless, flexible, cold-resistant and economical, it is a highly successful coating for food packages. Specify BAKELITE Brand Polyethylene yourself. It protects so much . . . so much better.

Ask your packaging supplier about **BAKELITE** BRAND **PLASTICS**

UNION CARBIDE

GET YOUR FREE COPIES . . . For a variety of ideas on the use of BAKELITE Brand Plastics in packaging, send for our "1958 Guide to Improved Packaging" and "The Role of Polyethylene in Creative Packaging and Successful Selling." Write Dept. AP-105.

BAKELITE COMPANY, *Division of Union Carbide Corporation,* 30 East 42nd Street, New York 17, N. Y.

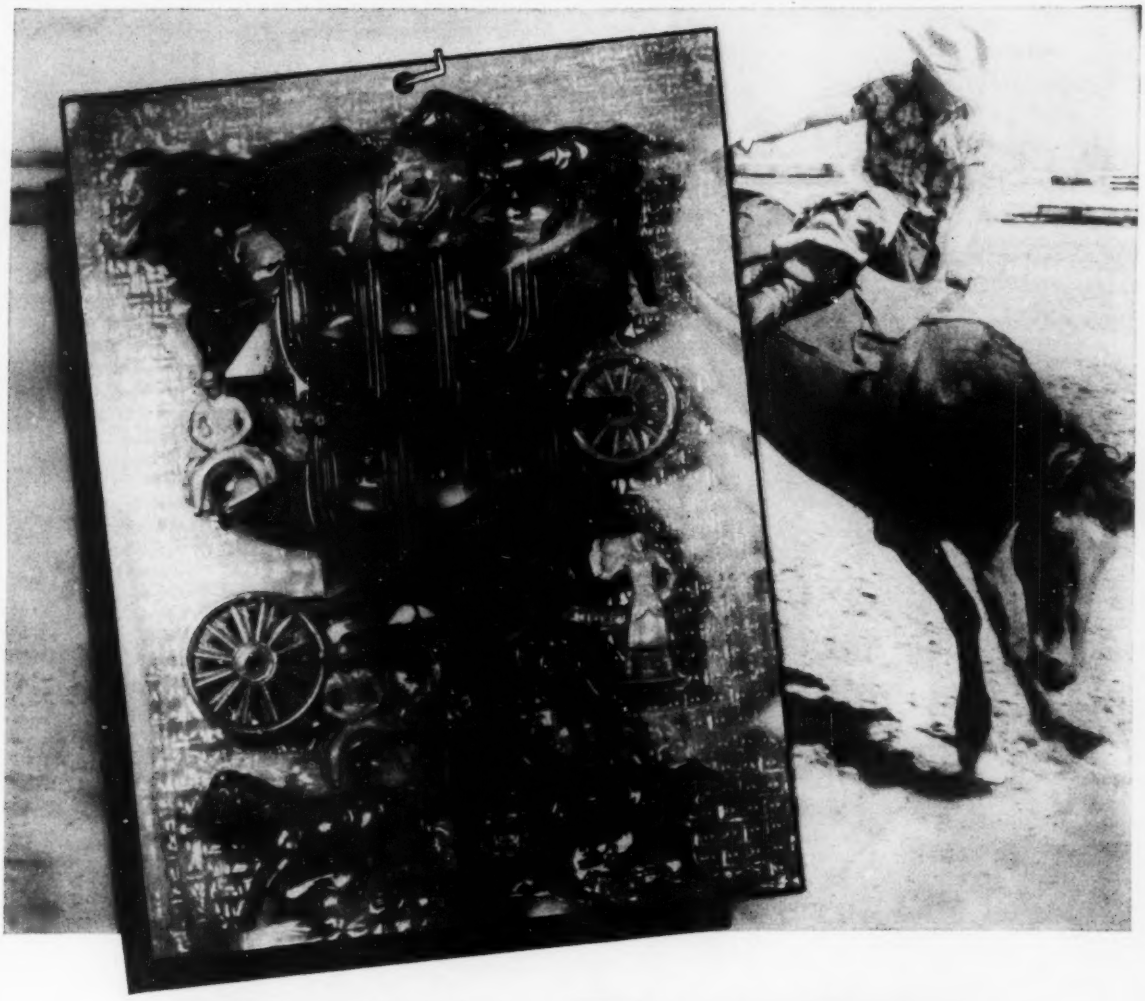
The terms KRENE, BAKELITE, UNION CARBIDE, and the Trefoil Symbol are registered trade-marks of UCC.

7 times a winner!

Seven different items . . . products requiring various pouch and carton sizes . . . are all packaged on this *one* versatile Bartelt Line at Jewel Tea Co., Inc. Bartelt high-speed, automatic equipment will handle liquids, powders, or solids in single or multiple units. Pouches are formed from heat-sealable papers, films, or foils . . . filled quickly and accurately . . . and strongly sealed. Any desired number of pouches can be inserted into cartons that are pre-formed in the cartoner unit. Whatever your packaging problem, let us help you. Write today. Our experienced personnel are here to help you.

BARTELT ENGINEERING CO.
1900 HARRISON AVENUE
ROCKFORD, ILLINOIS
New York Office, 370 Lexington Ave.

"Machinery for Creative Packaging"



Acetate Sheeting...

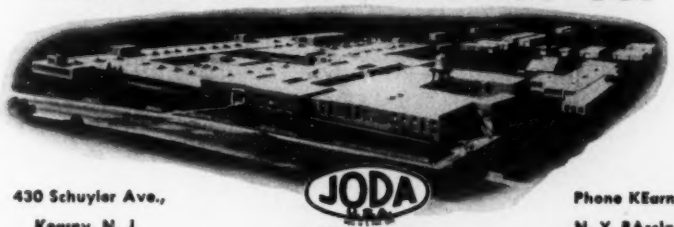
the perfect plastic for skin or blister packaging. JODA extruded acetate sheets, rolls and film in light to heavy gauges— transparent, translucent or opaque— excellent for vacuum forming.

BUTYRATE and LINEAR POLYETHYLENE
available in standard sizes.

For information and samples, contact

JOSEPH DAVIS PLASTICS CO.

The illustration shows a blister package made of JODA crystal clear acetate by Rel Manufacturing Corporation.

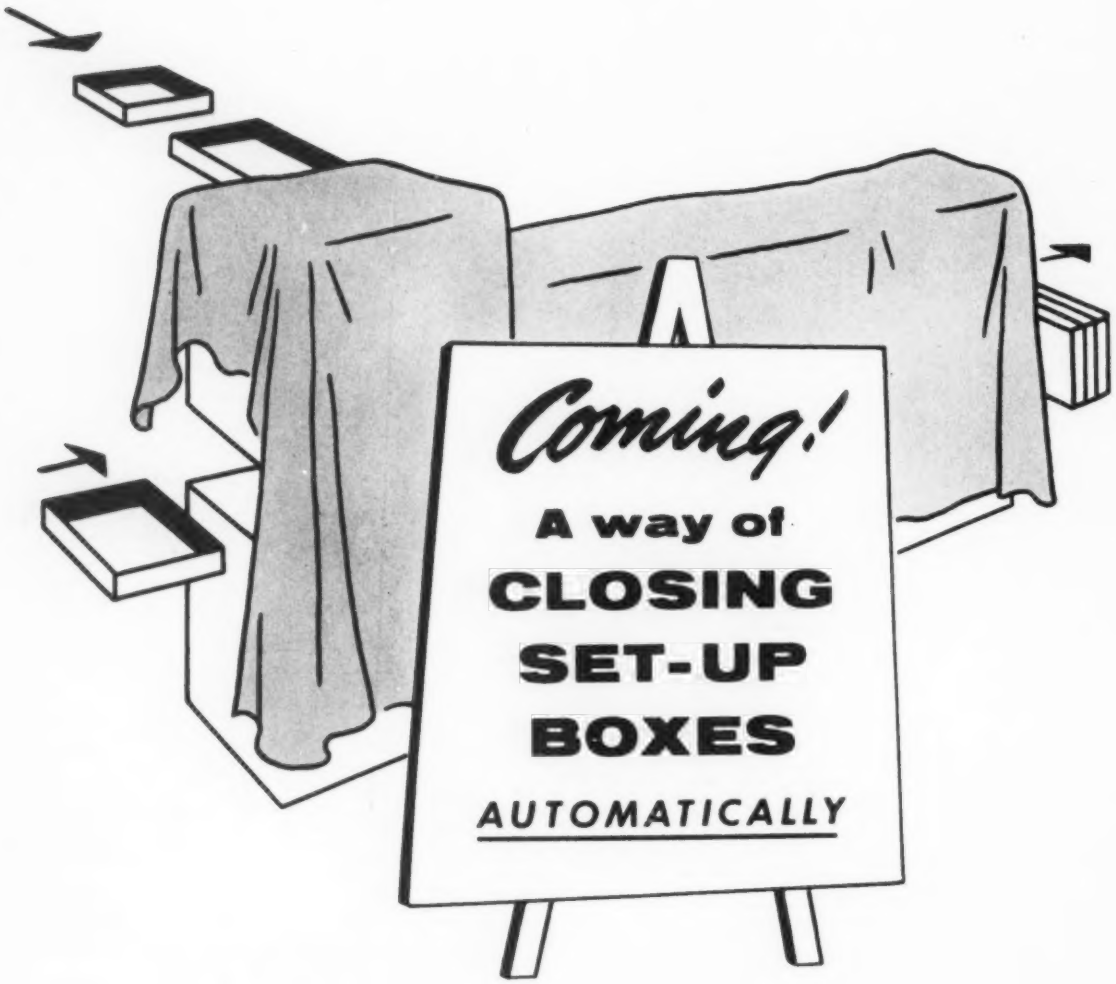


430 Schuyler Ave.,
Kearny, N. J.

Phone KEarny 2-0980-0981
N. Y. BArclay 7-6421-6422

Cable — Insel

Sales Representatives Conveniently Located



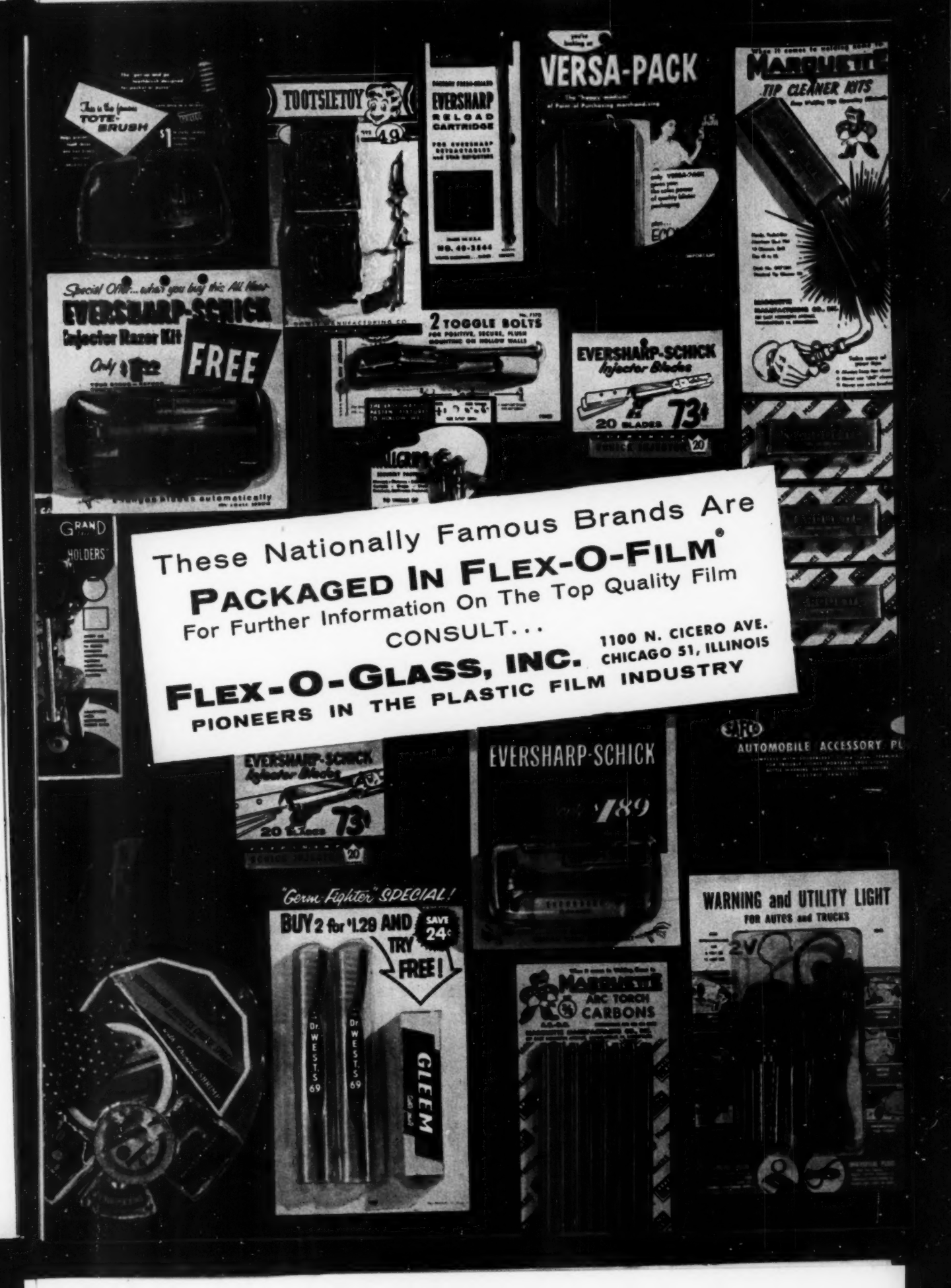
For the first time, a high speed automatic machine for closing set-up boxes. The Beck Set-up Box Lidder makes its debut shortly. It is the result of several years of planning and engineering; designed for the user as well as the manufacturer of set-up boxes. Reserve your copy of the Beck Set-up Box Lidder Bulletin — coming off the press soon.

CHARLES BECK MACHINE CORPORATION
20 CHURCH ROAD BECK **KING OF PRUSSIA, PA.**

AUTOMATIC ROLL SHEET CUTTER • RAZOR BLADE SLITTER AND REWINDER • SHEAR-CUT SLITTER
SHEETER-PRINTER FOR SAMPLE BOOKS • ENGRAVED ROLL PRINTER • CAN IMPRINTER • SET-UP BOX LIDDER

GRAEBER MACHINE DIVISION

UNIVERSAL TAG STRINGING MACHINE • TAG LOOPING MACHINE • TAG WIRING MACHINE


TOOTSIETOY
EVERSHARP RELOAD CARTRIDGE
VERSA-PACK
MARQUETTE TIP CLEANER KITS
Special Offer... when you buy this All New
EVERSHARP-SCHICK Injector Razor Kit
FREE
2 TOGGLE BOLTS
EVERSHARP-SCHICK Injector Blades
20 BLADES 73¢
These Nationally Famous Brands Are
PACKAGED IN FLEX-O-FILM®
For Further Information On The Top Quality Film
CONSULT...
FLEX-O-GLASS, INC.
1100 N. CICERO AVE.
CHICAGO 51, ILLINOIS
PIONEERS IN THE PLASTIC FILM INDUSTRY
EVERSHARP-SCHICK
AUTOMOBILE ACCESSORY
"Germ Fighter" SPECIAL!
BUY 2 for $1.29 AND TRY FREE!
SAVE 24¢
Dr. WEST'S 69
GLEEM
MARQUETTE ARC TORCH CARBONS
WARNING and UTILITY LIGHT
FOR AUTOS and TRUCKS
2V

Large scale convenience comes in a small package... when "do-it-yourself" aids are packaged in handy collapsible metal tubes by Wirz. What better way to keep product *in*, air out? Wirz tubes with built-in applicator tips stimulate new buying—*and* selling—habits. Discuss your packaging program with Wirz tube specialists.

PROTECTION • CONVENIENCE • SALES APPEAL COME IN TUBES BY *A. H.* **WIRZ** *Inc.*

RIGID CANS AND IMPACT EXTRUSIONS BY AMERICAN EXTRUSION CORPORATION, DIVISION OF A. H. WIRZ, INC.

4TH & COLE ST., CHESTER, PA.

ALSO CARROLLTON, KY.

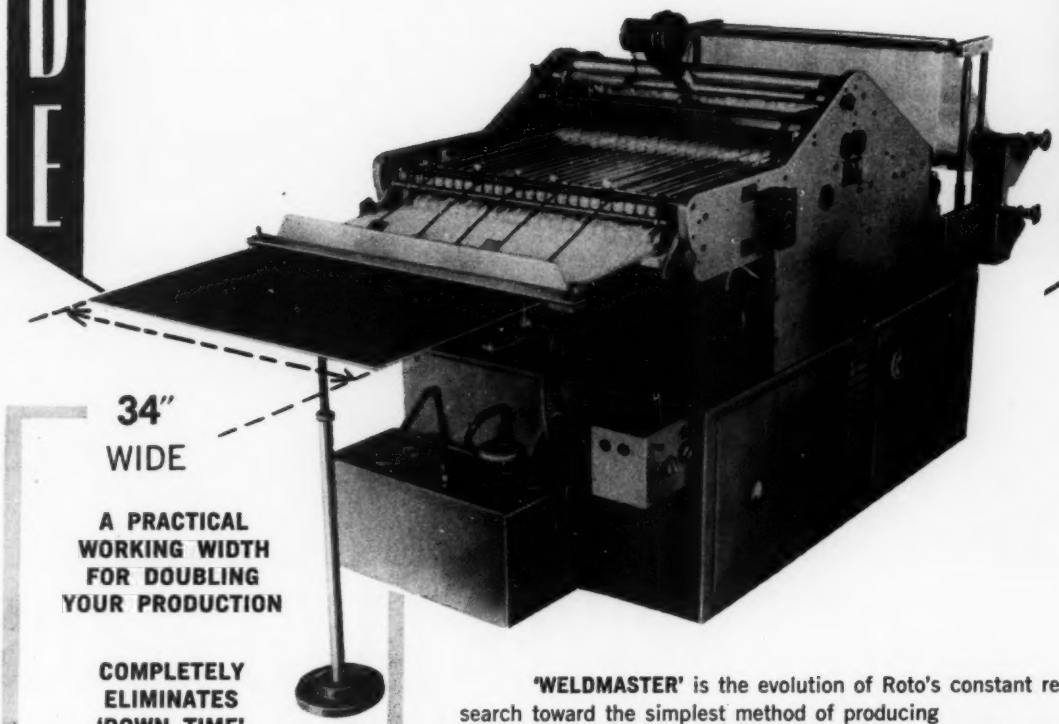
NEW YORK • CHICAGO • LOS ANGELES • MEMPHIS • HAVANA

SIDE SEAM

THE MACHINE YOU'VE WAITED FOR —
BY THE MASTER MANUFACTURER
OF SUCCESSFUL BAGMAKERS!

Roto Bag 'WELDMASTER'

FOR **POLYETHYLENE SIDE-SEAM BAGS** WITH **LIP**



34"
WIDE

A PRACTICAL WORKING WIDTH FOR DOUBLING YOUR PRODUCTION

COMPLETELY ELIMINATES 'DOWN TIME'

'WELDMASTER' CUTS IN 'THIN AIR' WITHOUT SEALING ROLLERS THEREBY COMPLETELY ELIMINATING RESIDUAL POLY DEPOSITS.

THE ULTIMATE IN SMOOTH, SIMPLE OPERATION WITH A **BARE MINIMUM OF MAINTENANCE COST!**

MAXIMUM SPEEDS OBTAINABLE ON **BOTH SINGLE AND DOUBLE OPERATION**

HANDLES FLAT SHEETING, PRE-FOLDED SHEETING AND TUBING

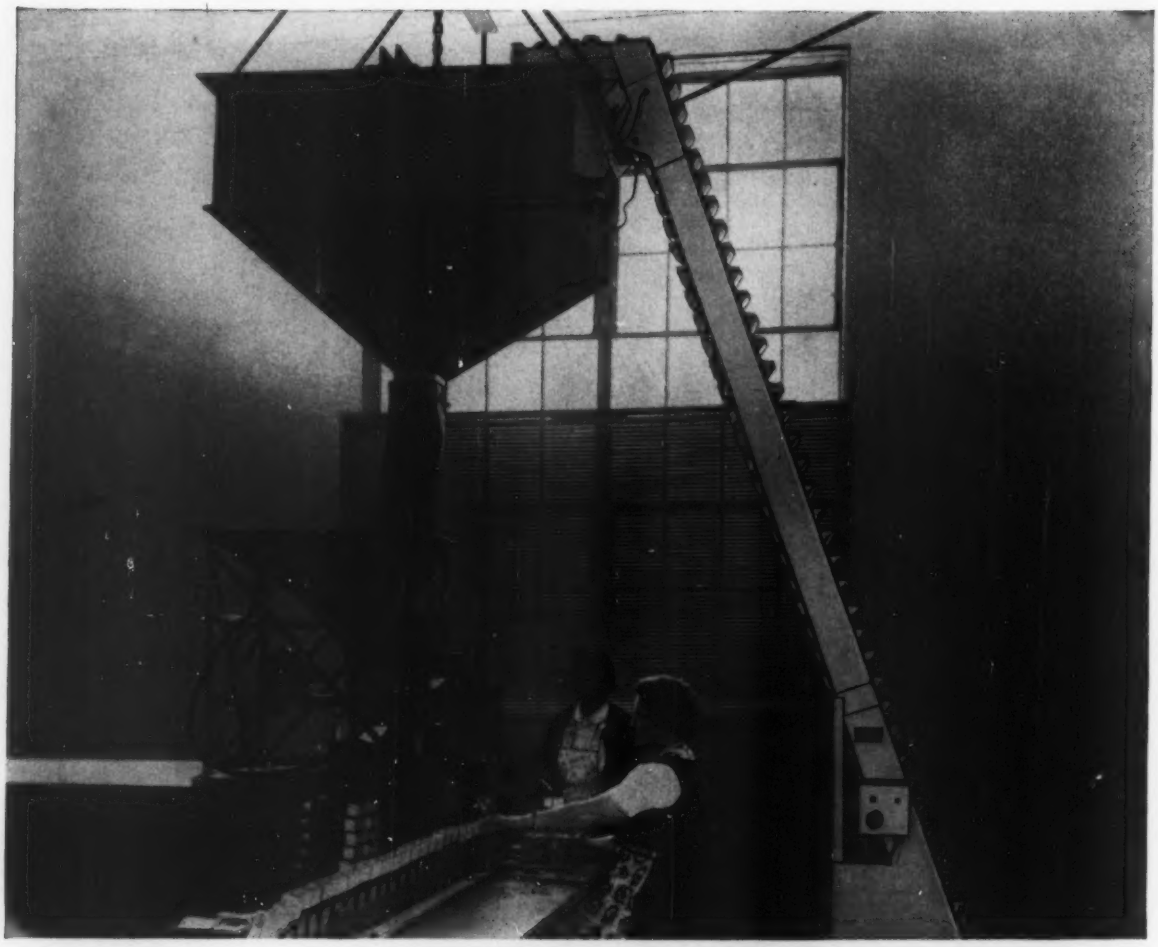
'WELDMASTER' is the evolution of Roto's constant research toward the simplest method of producing side-seam **lip** bags of singularly high quality, individually or in pairs.

The excellence of design means less maintenance, less 'down time', more working width and more **production** — all compelling reasons why this new performer takes its place in Roto Bag's solid cast of successful bagmaking equipment — all past-masters of polyethylene!

For full information regarding literature and demonstrations, write:

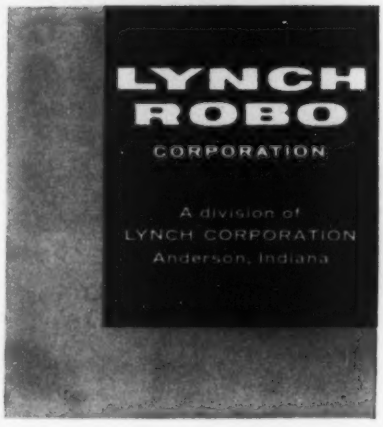
ROTO BAG MACHINE CORP.
SALES AGENT
CONAPAC CORPORATION
120 East 13th Street, New York 3, N. Y.

AGENTS
W. CANADA: Indust'l P'k'g Installations, Ltd., Vancouver, B.C.
E. CANADA: Package Equipment Service, Ltd., Toronto, Ontario
MEXICO: Agencia Comercial Anahuac, S.A., Mexico 1, D.F.
NORTHWEST U.S.: Duncan Equipment Co., Seattle, Wash.
OVERSEAS: C & A Holweg, S.A., Strasbourg, France



ROBO-LIFT MOVES MATERIALS UP-AND-OVER AT LESS COST!

Wherever bulk materials must travel up from one processing step and over to the next, it will pay you to consider the Lynch Robo-Lift. It saves time, manpower, and money because it does the entire job *automatically,* with no costly rehandling. Robo-Lift's clean, gentle, filling-without-scooping action handles food, drugs, chemicals, hardware (and just about everything!). It can't crush or contaminate materials, will not spill them, will not leak. Each installation is custom-designed to work with existing processing and packaging equipment. New folder "Up and Over" gives full facts. Write for it today.



ROBO-LIFT BUCKET ELEVATING CONVEYORS

Background for packaging

Notes, quotes and comments

Things are stirring in two older types of plastic film that have so far made little impression in packaging. *Polystyrene* film of an improved type is being quietly marketed by both Plax and Dow; Monsanto is also involved in this as the new half-owner of Plax. One of the biggest U. S. producers of *polyvinyl chloride* film is surveying the U. S. packaging market, may hook up with an Italian company on certain patented vinyl-packaging forms. Bakelite is reported to have a new non-toxic vinyl formulation which is being thermoformed into milk-bottle caps stronger and less costly than paper.

A new plastic is going to make a serious bid for the packaging market, starting this year. Montecatini of Italy has established an American marketing organization for its *polypropylene*, which is already in production and in use in Europe. Hercules Powder Co. meanwhile becomes the first American producer of polypropylene, with a plant at Parlin, N. J., going on stream at year's end. Polypropylene has properties not unlike polyethylene, but with a wider range and, like polyethylene, is made of basically low-cost petroleum gases. Source of Hercules' raw material will be a new high-purity propylene plant being opened by Sinclair at Marcus Hook.

Unexploited potential in the packaging of frozen foods was pointed out at a recent luncheon at which Seabrook Farms introduced new cook-in-bag Maxim's and Luchow's specialties. (See "Round the World Foods," MP, Dec. '57, p. 101.) Despite the fact that total frozen-food sales in 1957 were expected to reach $2½ billion, a Seabrook survey found that two out of three American homes still used no appreciable amount of frozen foods of any kind. A large majority (61%) of 700 homemakers surveyed said they averaged 1 hr. for the preparation of dinner. Only 24% reported using frozen prepared foods as often as once a week.

Frozen-foods packagers are irritating the very people they try to help—housewives for whom they print product directions and recipes on the exterior carton wrap. Gone and forgotten, women complain, are these helpful hints when the wrap in torn, mutilated or thrown away. Why not, they ask package designer *Saul Nesbitt*, print directions and recipes on the less fragile and now blank inner container?

Continued upswing in container shipments is predicted by Dept. of Commerce. Activity in the second quarter of 1957 was 12% above that of the first quarter. The fact that total production of containers and packages in the first half was 2% below the corresponding 1956 level reflected inventory consumption during the early part of 1957. Container-industry management generally expects figures for the last half of 1957 to exceed the 1956 level.

New data show growing appeal of home baking and the importance of packaged items designed for this do-it-yourself market. Only 5.8 cents out of every food dollar spent in supermarkets goes for baked goods, says *Progressive Grocer*. On the other hand, says *Chain Store Age*, $770,000,000 is spent for home baking needs in food chains alone—equal to expenditures for canned soups and vegetables together. Packaged pre-mixes for baking get $1.78 for every $1.02 spent for flour.

Significant news for packagers interested in the growing vending-machine market is the development of a machine which will actually accept a dollar bill and make change auto- [*Continued on page 42*]

matically. Operating on electronic principles, the machine accepts a $1 bill, scans it and—if satisfied that the bill is legitimate—returns two quarters, three dimes and four nickels. Machine doesn't balk at crumpled, torn or stained bills, but is reported to be uncanny in spotting fakes. Lack of such a change-maker has been the biggest barrier to getting larger quantities of packaged items into vending machines in unattended locations.

Have you checked retailers lately about the acceptance of your packages? Of 203 retail food organizations recently studied, half reported that they had refused to sell or threatened to stop selling products because of poor packaging. When manufacturers changed their package after retailer complaints, says *Printers' Ink*, sales increased as much as 50%, cost of handling dropped 10% and store net profits on the items jumped anywhere from 10 to 150%.

Background for packaging

Bottle makers are keeping an eye on the new pyroceram technique developed by Corning Glass Co., with a view to adapting it to super-strong glass containers. The pyroceram process is said to result in glass that is harder than carbon steel, lighter than aluminum and as strong as plate glass. Possibilities for multiplying the service lives of multi-trip glass containers are intriguing.

Male appeal of supermarket packages may deserve more attention from packagers. Of every 100 shoppers in supers today, 31 are men, *Progressive Grocer* reports. Many men *think* they are less extravagant than their wives and can shop more speedily; actually, studies have shown they are more susceptible to impulse purchases. Here's a challenge to designers to step up the impulse appeal of packages to catch the roving eyes of these marketing males.

A milestone in the movement of fast-selling drug items into the food stores was passed in 1956. For some time Nielsen has been keeping tabs on the relative drug-store and food-store sales of 10 commonly used household drug items; in 1956 the food stores crossed the median point and took 51% of the sales of these items, having steadily increased their share from 39% in 1952.

[*Continued from page 41*]

Bear in mind that about three-fourths of the sales in drug stores today are derived from non-drug items and the proportion is growing. No single retail trade is more interested in adding new packaged items. The situation is highlighted by Nielsen figures showing that a selected group of new items, when first introduced in drug stores in 1950, accounted for 7% of sales; in 1956 these same commodities had grown to the point where they provided 41% of total sales. Collectively, new-type items have grown 223% since 1950, while total sales of the old-type items have dropped 12%.

Revolution on the farm is noted by *Food Topics*, which says farm wives, far from being slaves to the old wood stove, are switching to convenience foods in big numbers. A panel of 500 rural housewives reported that they are joining their city sisters in planning family meals that can be prepared quickly and easily in order to give them more leisure time.

New capsule process has possibilities for unit packaging of many liquid products—cleaning fluids, shoe polish, perfumes—not suited to gelatin capsules. Patented process of the French chemist, *Jean Pathus-Labour*, it uses a coating of highly resistant calcium alginate, is said to be suitable for non-water-miscible substances. Necessary equipment is reported to be inexpensive; production costs, very low.

lue Ribbon Perfor nce

For two consecutive years Package Products' na team has taken top awards in the National Fl ckagi on. whether it's labels or films, you can be ur illful when you turn to Package Products.

DESIGNERS, PRINTERS AND FILM CONVERT ACKAGING

Packages that SELL by Package Products

Packages that SELL by Package Products

Blue Ribbon Performance

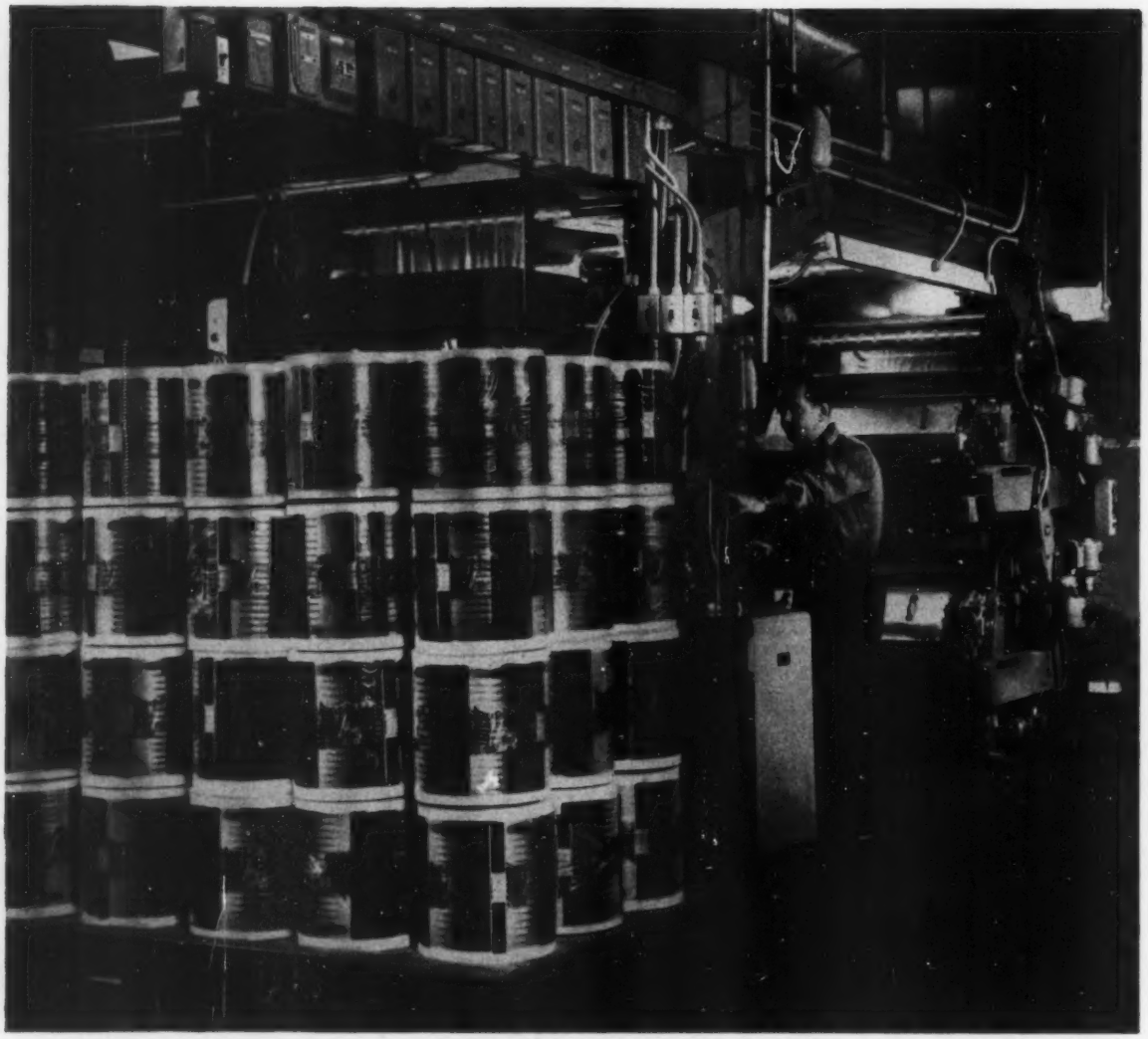
For two consecutive years Package Products' nationally recognized design team has taken top awards in the National Flexible Packaging Competition. So, whether it's labels or films, you can be sure your package is in skillful hands when you turn to Package Products.

DESIGNERS, PRINTERS AND FILM CONVERTERS FOR PACKAGING.

Package Products

CO., INC., CHARLOTTE, N. C.

Sales Offices in DALLAS, HOUSTON, KNOXVILLE AND NEW YORK.



Certified 8 hour multi-color — including metallic gold — production of 1¼ mil polyethylene sheeting, was 30 full rolls slit on the press to yield 60 rolls of stock ready for the bag machine.

POLYETHYLENE PRINTED

400 feet per minute... all day!

Fastest on Polyethylene

Here's the Kidder answer to flexible printing that's at its best *all the time.*

Now high speed, high sustained production rate and high quality on both cellophane and polyethylene are all tied together in a single filmprinter. Actually you can't afford *not* to know more about the modern Kidder Filmprinter.

For more information write Kidder Press Company, Inc., Dover, N. H. or Kidder Press Company, Inc., Empire State Building, 350 Fifth Avenue, New York 1, N. Y. *Mid-West Representative:* Gibbs-Brower Company, Incorporated, 400 Washington Building, Madison 3, Wisconsin. *West Coast Representative:* Bojanower Machinery Service Corporation, 5270 East Washington Boulevard, Los Angeles 22, California.

Make good impressions faster with

Kidder

FILMPRINTERS

SEND FOR THESE *Bulletins* ON

HEAT SEALING

POLYETHYLENE, PLIOFILM, VINYLS, SARAN, CELLOPHANE, GLASSINE, FOIL, COATED PAPERS, SCRIM-BACK, LAMINATES

Ask your Doughboy representative to show you how to reduce your packaging costs!

Atlanta, Georgia
THE ISON CO.
1105 Spring St. N.W.

Boise, Idaho
DIXON & CO.
1500 Grand Avenue

Charlotte, North Carolina
THE ISON CO.
1232 W. Morehead St.

Chicago, Illinois
DIEDERICHS & GRIFFIN CO.
6215 West Touhy Ave.

Cincinnati, Ohio
CHARLES WALL
8955 Woodview Drive

Dallas, Texas
R. P. ANDERSON CO.
2503 West Mockingbird Lane

Denver, Colorado
EDWIN F. DELINE CO.
224 West Alameda Ave.

Detroit, Michigan
DIEDERICHS & GRIFFIN CO.
2591 West Grand Blvd.

Haddonfield, N.J.
(Philadelphia)
WILLIAM B. SANFORD, INC.
115 North Brookfield Road

Houston, Texas
R. P. ANDERSON CO.
514 West Main

Kansas City, Missouri
TURNER INDUSTRIAL PRODUCTS
207 West 31st Street

Los Angeles, California
WATTS KING CO.
3404 N. Figueroa St.

Miami, Florida
STILES CONVEYORS & TRANSMISSIONS CO.
596 N.W. 54th St.

Needham, Massachusetts
(Boston)
J. A. WOOD
853 Great Plains Avenue

New Orleans, Louisiana
R. P. ANDERSON COMPANY
201 Board of Trade Annex

New Richmond, Wisconsin
(St. Paul-Minneapolis Area)
DOUGHBOY INDUSTRIES, INC.

New York, New York
WILLIAM B. SANFORD, INC.
601 West 26th Street

Rochester, New York
DYGERT & STONE, INC.
56 Industrial Street

St. Louis, Missouri
PACKAGING-EQUIPMENT INC.
2012 Olive Street

Salt Lake City, Utah
DIXON & COMPANY
159 West Third South

San Francisco, California
FOOD EQUIPMENT & SUPPLY INC.
210 Mississippi Street

Seattle, Washington
DUNCAN EQUIPMENT CO.
506 Broadway

CANADA:

Montreal, P.Q.
GRISWOLD ENGINEERING LTD.
146 Bates Road

Vancouver, B.C.
INDUSTRIAL PACKAGING INSTALLATIONS LTD.
57 Water Street

Also representatives in most foreign countries; names will be submitted on request.

Do Better with Doughboy

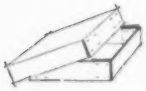
Doughboy *Industries, Inc.*
MECHANICAL DIVISION
NEW RICHMOND, WISCONSIN, U.S.A.

Gentlemen: Please send bulletins on heat sealing, labeling and code dating.

NAME_____

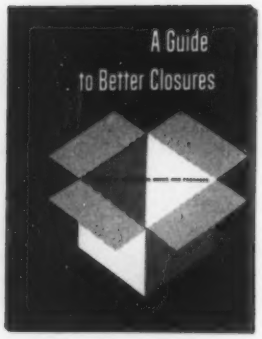
ADDRESS_____

CITY_____ ZONE_____ STATE_____



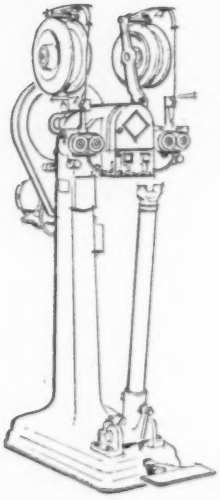
CLOSURE IDEA BULLETIN

For Users of Fibreboard Boxes



The box closure handbook, "A Guide To Better Closures", discusses the common box closure methods in a factual, easy-to-read sequence. This new handbook provides a background for making basic decisions on box closure methods. Send for your free copy today.

Large volume shippers who use stitched fibreboard boxes are discovering additional economies through the use of dual head box stitchers. These machines increase box closure production from 25% to 50% per man hour compared with single head machines. Three different types of Acme Steel box stitchers are now available with dual stitching heads. The dual heads drive twin stitches, side by side. Wire is drawn from two separate coils, cut, formed, driven and clinched simultaneously. One dual head machine is the post-type stitcher used for closing the bottoms of slotted boxes. The dual head, arm-type stitcher is used for fastening the sides and ends together on telescope or folding boxes.



Another dual head machine is the new Model H20AY developed especially for the beverage industry. This stitcher speeds assembly of three-piece beverage containers by driving two stitches at a time on a double unit straight arm.

Box closure problems which look difficult to you may be routine to the Acme Idea Man. He will be able to draw on the 75 years Acme Steel Company has worked with wire stitchings as well as his own intensive experience. Call for his help today. Write to Dept. MDW-18, Acme Steel Products Division, Acme Steel Company, Chicago 27, Illinois.

ACME STEEL **WIRE STITCHING**

Sold – and Still Selling

Scientific package design by Western-Waxide can make the impulse sale and keep right on selling in the home. But to do the *complete* selling job of building brand loyalty and making repeat sales, your package must protect all the flavor and freshness of your food product.

This colorful package combines "Taste Excitement," useful serving suggestions and recipes to produce a package that sells both in the store and in the home. The special formula Glosseal® overwrap preserves all the natural goodness of Del Monte raisins. Western-Waxide's excellence in the graphic arts combined with its packaging research and development laboratories can create a package that will do a *complete* selling job for you. There's a Western-Waxide representative near you that can start *your* product on the way to "*increased sales . . . by design.*" Call him now.

Increased Sales
. . . by Design!

CROWN ZELLERBACH **WESTERN-WAXIDE DIVISION**

Headquarters Office: 2101 Williams St., San Leandro, Calif. • Plants and Sales Service Offices in Principal Cities of the United States

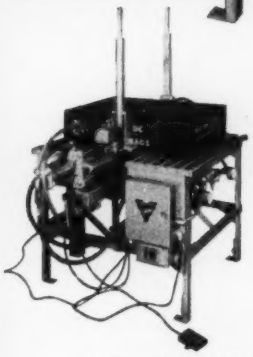
Manufacturers and converters of plain and printed waxed paper • foil • foil laminates • polyethylene coated paper and poly-film laminates • films • bags • pouches and other specialized flexible packaging materials ©

NOW...end your carton closing problems with *International end staplers!*

Your operator simply pushes a filled telescope, overlap, or end closing cartons against the mechanical trip of the International End Stapler and air-power drives and clinches a strong steel staple from the outside. You can close as many cartons as your operator can move. There is no waiting time for the equipment and depending on the size of the carton and the number of staples required, you can close up to 500 cartons per hour.

The International End Stapler has built in penetration and clinch control. It can be adjusted for the height of the carton and the stapling head can be turned at an angle of 90 degrees to handle center slotted cartons. The International End Stapler can be furnished without legs, to serve as a Bench Model.

Stapling is faster and more economical than taping or gluing and you get a more securely closed carton. There's an International Stapler for every type of carton. We'll be glad to have an International representative explain the cost-saving features of this equipment to you.



AUTOMATION IN CARTON CLOSING

The International Twin End Stapler closes both sides or ends of a carton at the same time. Positioned in your production line, the Twin End Stapler automatically adjusts for various sized cartons. Staples are driven and clinched simultaneously on both sides of your filled cartons at a rate up to 800 cartons per hour.

INTERNATIONAL Gold Crown

International Staplers

INTERNATIONAL STAPLE & MACHINE CO.

ORIGINATORS OF CARTON CLOSING STAPLERS

800 E. HERRIN STREET • HERRIN, ILLINOIS

WRITE FOR FREE LITERATURE

International Staple and Machine Company
800 E. Herrin St., Herrin, Illinois

Please Send Literature on

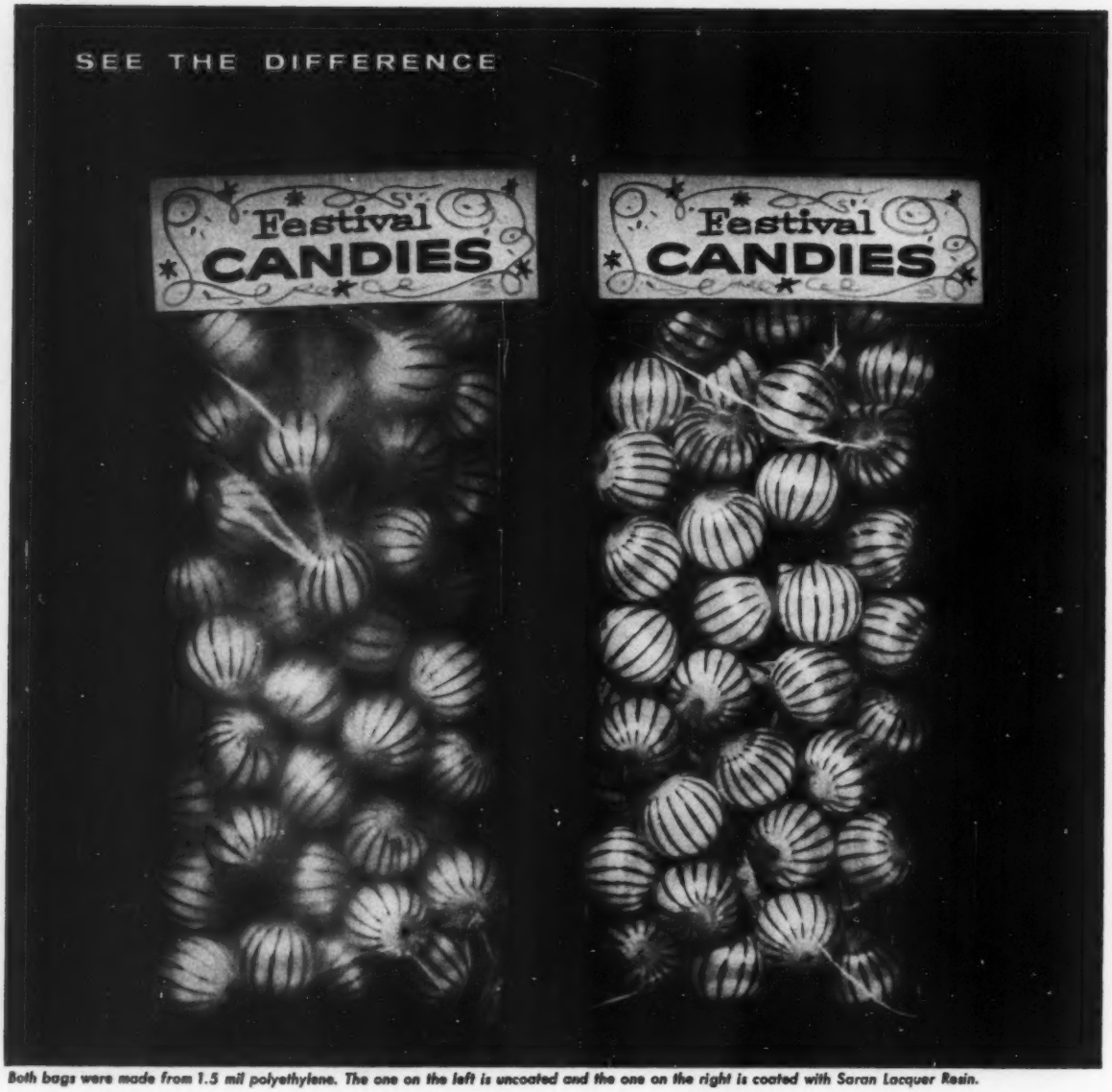
☐ End Stapler ☐ Twin End Stapler ☐ Bench Model

Name.....

Company.....

Address.....

City..... Zone..... State.....



Both bags were made from 1.5 mil polyethylene. The one on the left is uncoated and the one on the right is coated with Saran Lacquer Resin.

Saran Resin F220
brings new clarity to polyethylene

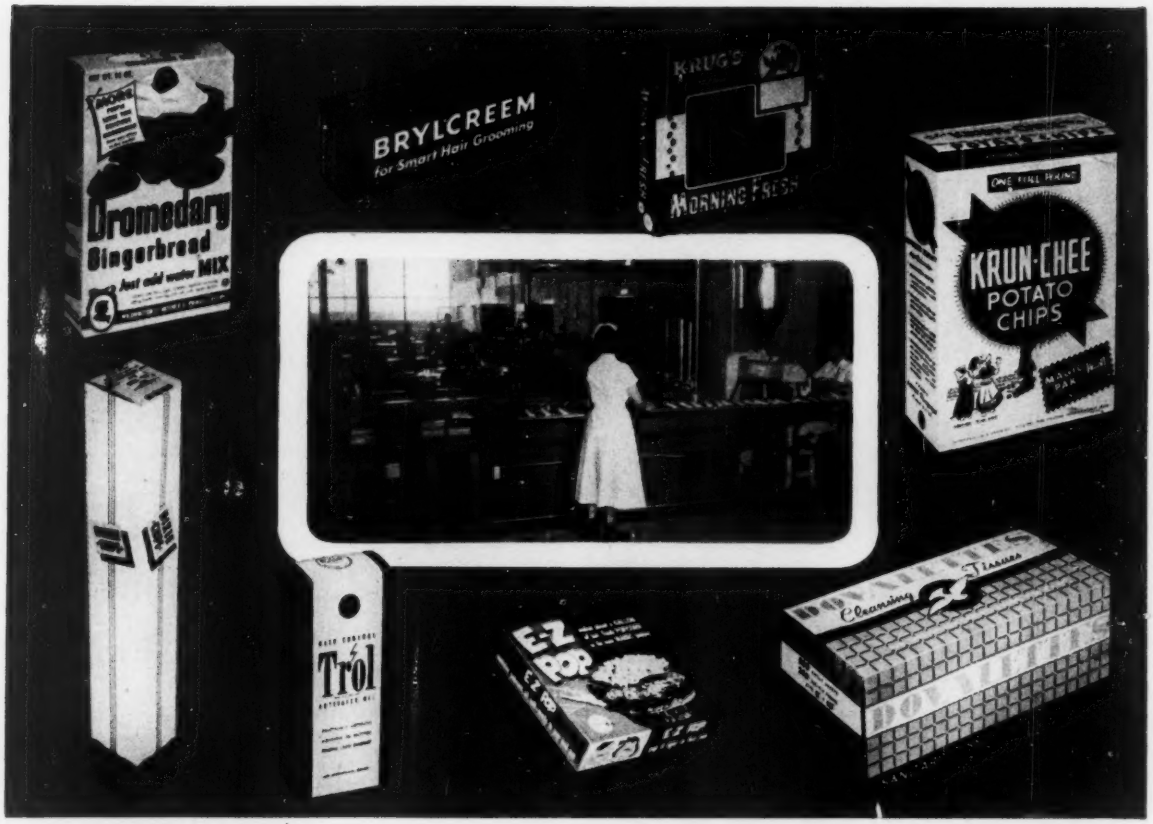
No need these days for cloudy packaging to blur the visual appeal of any product. It takes only a thin coating of Saran Resin F220 to clear up polyethylene packaging films and put the contents on sales-making display.

Along with eye appeal, Saran Resin F220 will enhance the protective properties of your polyethylene . . . reduce gas transmission rate . . . increase resistance to oils, greases, acids and many organic liquids and vapors. It all adds up to new usefulness for polyethylene.

Saran Resin F220 saves you time and money in the coating operation . . . on your present equipment. It is soluble in acetone, releasing solvent at lower temperature. Less coating is required . . . coating cycle is speeded up . . . costs are lowered.

Let us send you the technical data. You'll see how easy it is to add all these advantages to your packaging films . . . and paper, too . . . with Saran Resin F220. Write THE DOW CHEMICAL COMPANY, Midland, Michigan, Coating Sales Department 2256 B.

YOU CAN DEPEND ON DOW



CECO MODEL 40 ADJUSTABLE AUTOMATIC CARTONER

SPEEDS PACKAGING . . . CUTS COST
HANDLES WIDE RANGE OF CARTON SIZES

Here, in a low cost machine, are all the automatic features found only in the most expensive cartoners. No other horizontal loading machine, at any price, offers such versatility, low-cost operation and low upkeep as the CECO Model 40.

Handling the carton automatically from hoppering through closing or sealing, with the product inserted manually, the Model 40 provides a great saving in time and labor. One user reports a 54% saving in labor, with 6 operators cartoning as many pieces as 13 operators did by previous methods. Depending on the size of the carton, the CECO Model 40 will produce up to 40,000 sealed cartons per day with only one operator.

These advantages, and many more, mean substantial reductions in your packaging costs. Why not get the full money-saving details today? *Write for illustrated brochure.*

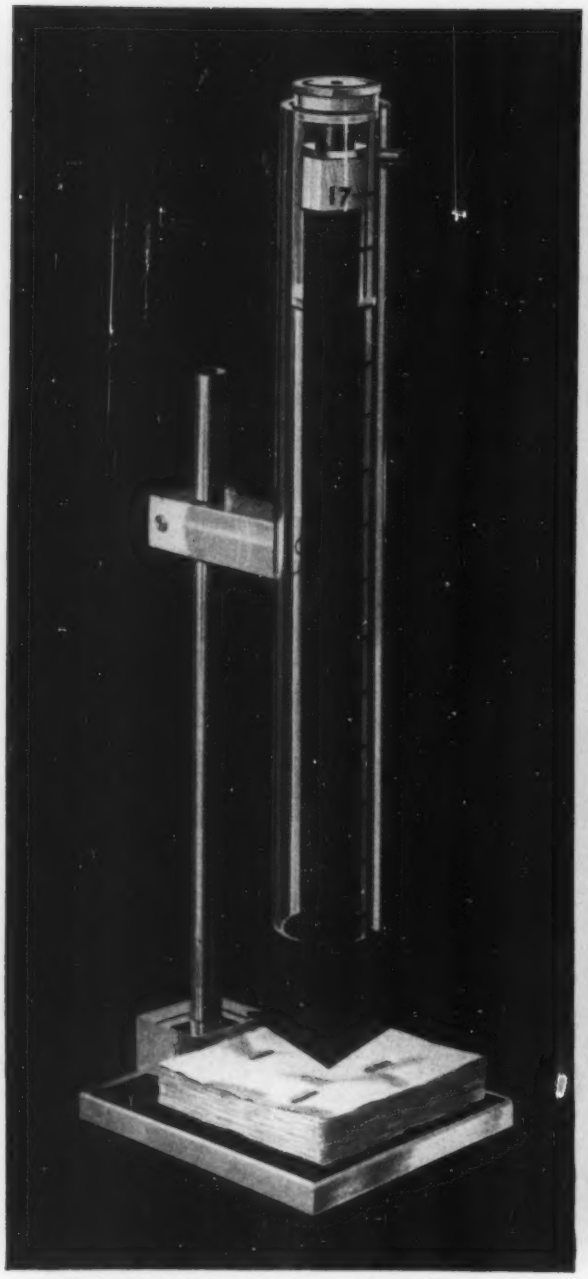
The CECO Model 40, like all CECO Glue Sealers and Cartoners, is a self-contained unit, mounted on casters for easy portability. Models are available to tuck both ends, or glue seal both ends, or tuck one end and glue seal the other. It can be used as a set-up machine to close one end only. It automatically produes clean, square, strong cartons at lowest cost.

CONTAINER EQUIPMENT CORPORATION

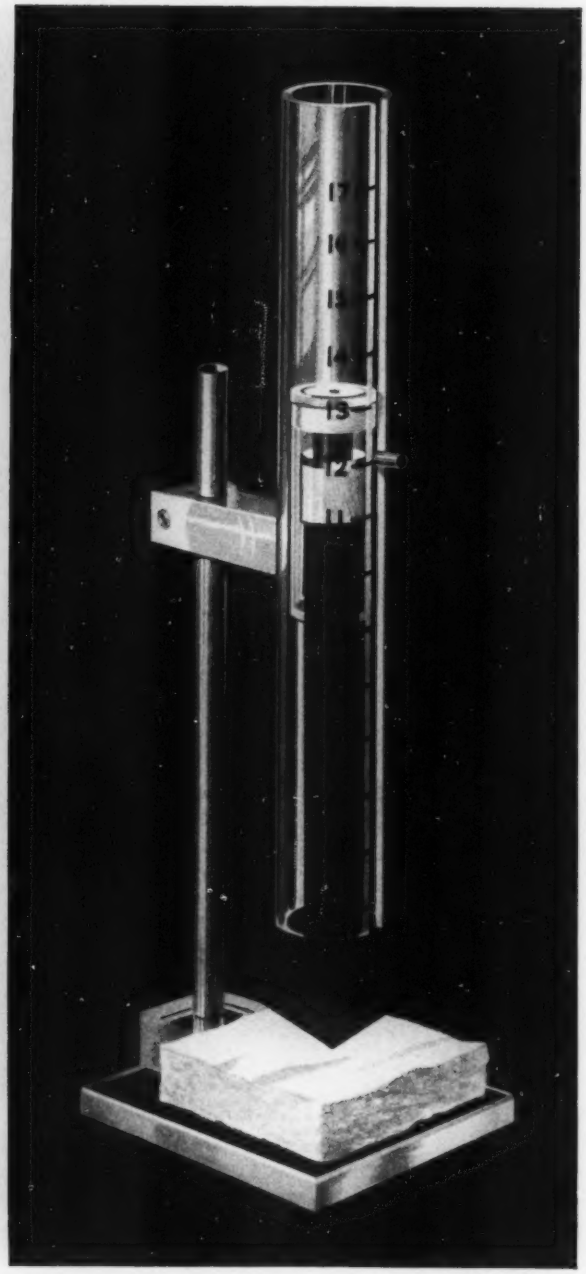
MEMBER, PACKAGING MACHINERY MANUFACTURERS INSTITUTE

78-88 LOCUST AVENUE, BLOOMFIELD 3, N. J.

PHILADELPHIA • BOSTON • CHICAGO • DALLAS • JACKSON
NEW YORK • SAN FRANCISCO • SAVANNAH • TORONTO



Kimpak can absorb the shock of a capsule dropped from a height of 15 inches without separation of the magnet and metal disk.



With another cushioning material of the same weight as Kimpak, 9.2 inches is highest capsule can be dropped without separating magnet and metal disk.

How test is made

For the "Shock Comparison Test" a small iron disk is held by a magnet. Both are contained within a transparent capsule. The capsule is dropped in a lucite tube onto a pad of cushioning material. The highest point from which the drop can be made without the magnet losing its hold on the metal disk is a direct measure of the shock absorbency of the cushioning material.

more shock absorption with

KIMPAK®

INTERIOR PACKAGING

How much cushion protection can you expect from an interior packaging material? You can't tell too well from its apparent thickness. Most important is its *effective thickness*—or the *working thickness under load.*

The "Shock Comparison Test" was developed by the U. S. Forest Products Laboratory, Madison, Wisconsin, to compare the shock absorbency of cushioning materials under laboratory conditions. Pictured here is the instrument used in the test.

In the pictures of this test at left, the superior shock absorbing qualities of Kimpak are clearly demonstrated. The other cushioning material with *more apparent thickness* than Kimpak can absorb only about ⅔ as much shock.

This is because the specified thickness of Kimpak is all *effective thickness.* Kimpak is engineered to give you more working thickness than other cushioning materials of the same weight and cost . . . and consequently more shock absorption.

Kimpak in rolls or sheets cut to size is distributed in all major cities. Call your distributor or Kimberly-Clark for a packaging engineer to show this and other modern laboratory tests with Kimpak *right at your desk.* He will help you with your packaging problems, too.

FREE

Measure the effective thickness of cushioning materials under the standard 3½ pound per square foot load prescribed by Federal Specification.

Kimberly-Clark offers this Standard Weight, precision made of sturdy aluminum, *free* to all packaging engineers and cushioning buyers. Just ask the Kimpak salesman who calls on you. Or write to Kimberly-Clark, Dept. M-18 Neenah, Wisconsin.

Kimberly-Clark
INTERIOR PACKAGING
KIMPAK

Kimpak is a trademark of
Kimberly-Clark Corporation, Neenah, Wisconsin

whatever the job . . .

SELF-STICKING

PERMACEL® TAPE

Another product of PERMACEL-LEPAGE'S INC. New Brunswick, N.J.
a Johnson-Johnson company

Tapes • Adhesives • Electronic and Chemical Materials

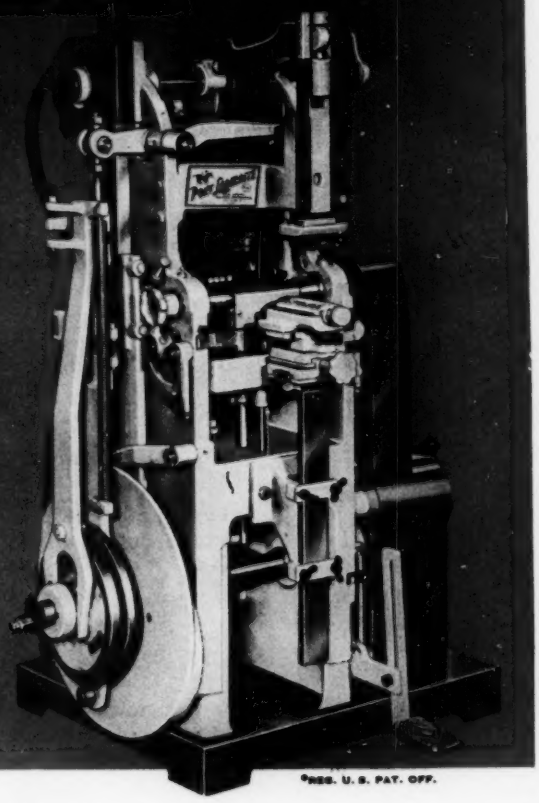
Economical semi-automatic labeling for short runs and frequent job changes

PONY LABELRITE*

Exclusive vacuum principle delivers fast, precision labeling. Uniform label pick-up, precise label placement, complete elimination of excess glue.

Applies labels to recessed, paneled, convex or concave surfaces. Handles foil, varnished or embossed labels. Can be used with nearly all types of products or containers.

Simple, low-cost change parts; 15 minute change-over. Ask for details, proof, demonstration.



*REG. U. S. PAT. OFF.

OPERATING ADVANTAGES

ADAPTABILITY. Fits any standard production line.

SPEED. Smaller work often permits two-at-a-time feeding.

PERFECT REGISTER. Positive delivery of label from hopper to container.

POSITIVE GLUE CONTROL. Twin rollers for uniform glue distribution.

OVER-ALL OR STENCIL GLUING. Over-all gluing standard; strip or pattern when desired.

LOW OPERATING COST. No inspection and wiping, faster feeding without fatigue.

QUICK CHANGE-OVER. Operator can easily make her own change-over.

SELF-CLEANING FEATURE. Quick, simple; takes less time from productive hours.

VERSATILE. Works with amazing variety of sizes, shapes, materials, objects.

PREVENTS EXCESSIVE ADHESIVE. Positive control of glue film, no wiping of containers.

NEW JERSEY MACHINE CORPORATION

AUTOMATIC LABELING

PACKAGING • PAPER BOX MACHINERY • MAKERS OF THE PONY LABELRITE

FACTORY SALES AND SERVICE BRANCHES:
CHICAGO, CINCINNATI, LOS ANGELES

GENERAL OFFICES AND PLANT: 1500 WILLOW AVENUE, HOBOKEN, N. J.

A message of significance
for anyone who buys or uses cans—

Bliss is now designing, building and equipping complete can plants

E. W. Bliss Company has so expanded its facilities and staff that it is now offering *complete* plant-building service to can users and manufacturers.

This "turn-key" plant concept means that we can provide a customer with everything he needs—from a survey of the economic advantage or disadvantage of operating his own plant right up to building it, equipping it, training his personnel, and getting the entire operation underway as smoothly as possible.

We will either take complete responsibility for design and construction, or work with a specialized consulting engineering firm, adding to the consultant's specialized talents Bliss' own personnel, manufacturing facilities, and long familiarity with and experience in the can manufacturing field.

For *users* of cans, the implications of this entirely new service is obvious. And the service is no less meaningful for can *manufacturers:* The regional plant—is it practical, is it economically feasible?

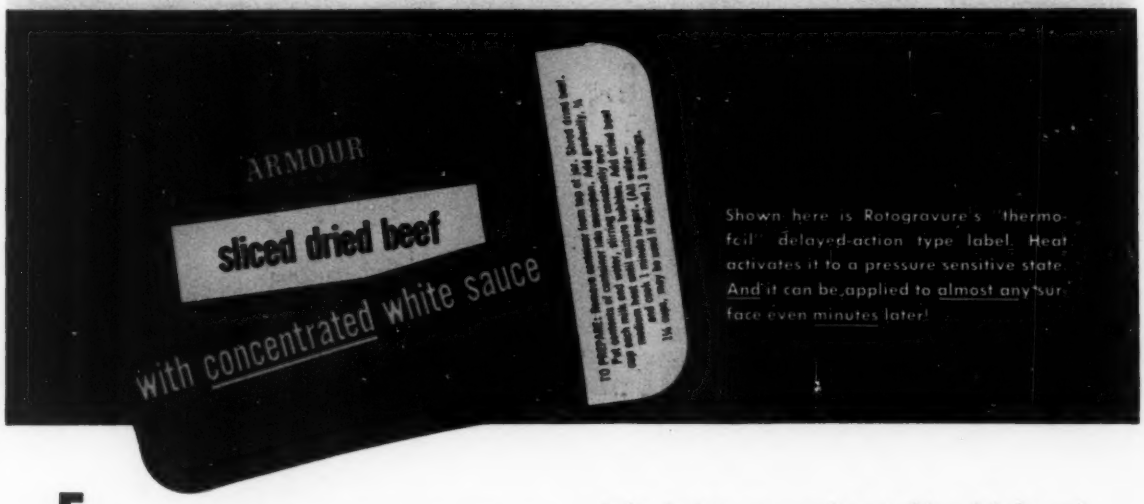
If you're seriously considering moves of this kind, Bliss' new "turn-key" concept deserves your thoughtful consideration. We'll be glad to talk out all the details with you. A number of our executives will be available at Bliss' booth during the Canner's Show, Atlantic City, January 18 through 22. Or if you prefer, drop us a note, and we'll arrange an appointment at your convenience.

Bliss is more than a name... it's a guarantee

BLISS
SINCE 1857

E. W. BLISS COMPANY
Can Machinery Division
Canton, Ohio

Make her "Eager to Buy" with FOIL LABELS!


ARMOUR
sliced dried beef
with concentrated white sauce
Shown here is Rotogravure's "thermo-foil" delayed-action type label. Heat activates it to a pressure sensitive state. And it can be applied to almost any surface even minutes later!

Eye appeal means stimulated sales! That's why you put first things first when you package with boldly-colored, sharply-printed Rotogravure Packaging foil heat seal labels and wraps.

Rich-looking Rotogravure foil labels arouse housewives' curiosities, whet their appetites, raise their eagerness to the buying pitch! Result: your sales volume starts climbing to new and record levels!

Check these 6 big features of Rotogravure foil heat seal labels:

- **Lower Production Costs—through fast, simple, accurate heat-sealing**
- **More Brilliant Colors**
- **Precise Registration on Containers or Wraps**
- **Firm, Neat Anchoring of Corners, Dye-Cut Edges**
- **Smooth, Unwrinkled Bonding**
- **No Smears or Smudges on Containers or Wraps**

For complete service, Rotogravure produces heat seal labels on foil and paper. Overwraps are run on foil, paper and laminated stock. Jobs can be run in up to six colors. And to help design your sales-sparking labels and wraps, you can call on our expert Design Division.

NO MINIMUM RUNS

A highly unusual feature of our service is our policy of no "minimum run" requirements. We look on each job as a challenging merchandising project—not just another production order. We believe this is sound business because this is the way our business has grown.

See the striking look of Rotogravure cost-cutting, sales-boosting labels for yourself! *For a packet of samples just write or wire.* (Or ask any question you may have.)

Offices in principal cities

Rotogravure Packaging INC.

ADDISON, ILLINOIS

Telephone: TERRACE 4-7040

Caps by Wheeling for Cans, Tubes, Bottles

The crowning touch for *your* product containers are *Caps by Wheeling*, precisely molded from hard or soft plastics to rigid specifications—assuring product protection from factory through consumer use. They are finished flawlessly to enhance the appearance of the container.

All stock sizes of *Molded Caps* are immediately available for metal or plastic tubes, glass or plastic bottles, and cans. *Fast Wheeling service*, too, for those who "need them yesterday."

Custom Molded Caps are a particular specialty at *Wheeling*. These may be provided in any color, style or shape, with or without brand name or trademark identification. Consultation and design service on these are available without obligation.

WHEELING STAMPING CO., WHEELING, W. VA.

• *Aluminum, Tin and Lead Collapsible Tubes* • *Molded Caps for Tubes and Bottles* • *Plastics Specialties*

SALES OFFICES IN THESE LEADING CITIES—CONSULT YOUR CLASSIFIED 'PHONE DIRECTORY:

NEW YORK · BOSTON · PHILADELPHIA · CHICAGO · CLEVELAND · CINCINNATI · ST. LOUIS · MINNEAPOLIS · LOS ANGELES

NOW ... put more sell in

"see-thru" packages

...with BBD "GOLD-TONE" and "MET-L-TONE" Flexographic Inks

adds elegance to moistureproof cellophane

• Low Cost • Prints Clean
• Non-Tarnishing • Ready-Mixed

Your customers will agree—"GOLD-TONE" Ink puts snap and smartness in cellophane packaging. And now you can give them the distinctive richness of gold—without difficult production problems—at a cost that makes sense. "GOLD-TONE" costs only half as much as regular gold inks, prints as easily as any other fine BBD alcohol-type flexographic ink, reduces need for frequent washups, cuts down on plate and roller wear. Designed for reverse printing on all types of moistureproof cellophane, "GOLD-TONE" Ink prints clean and sharp... won't chip, crack or tarnish with age. What's more —"GOLD-TONE" Ink comes ready-mixed in a wide range of shades, from pale gold to sultry copper tones. Let BBD show you some of the striking effects possible with "GOLD-TONE" Ink. Write for sample prints today.

sparks up films and papers

• Eye-Catching Colors
• Easy to Print • Strong Adhesion

Flexible packaging users want striking new color effects that help their products sell on sight. Now you can give them the shimmering brilliance of metallic color with BBD "MET-L-TONE" Ink. Designed for use on cellophane (all types except Saran-coated), polyethylene and glassine, "MET-L-TONE" Ink looks smart on paper and board too —may even be waxed without fear of bleeding. "MET-L-TONE" Ink is alcohol-soluble, specially formulated to assure maximum beauty and printability, strong adhesion and high block-resistance. For more effective packaging, suggest and use BBD "MET-L-TONE" Ink. We'll gladly send you full information about "MET-L-TONE" and sample prints showing it in various shades of red, green, blue, purple and brown.

For details about "GOLD-TONE" and "MET-L-TONE" Inks, plus free sample print folders, contact your nearest BBD or Sun Chemical office ... or write direct to Bensing Bros. and Deeney, 3301 Hunting Park Avenue, Philadelphia 29, Pa.

Bensing Bros. and Deeney

Flexographic Ink Specialists

Manufacturing plants in
PHILADELPHIA • CHICAGO • SAN LEANDRO, CAL.
CAMBRIDGE, MASS. • MONROE, LA.

Sun

A subsidiary of Sun Chemical Corporation

Sales offices in all principal cities

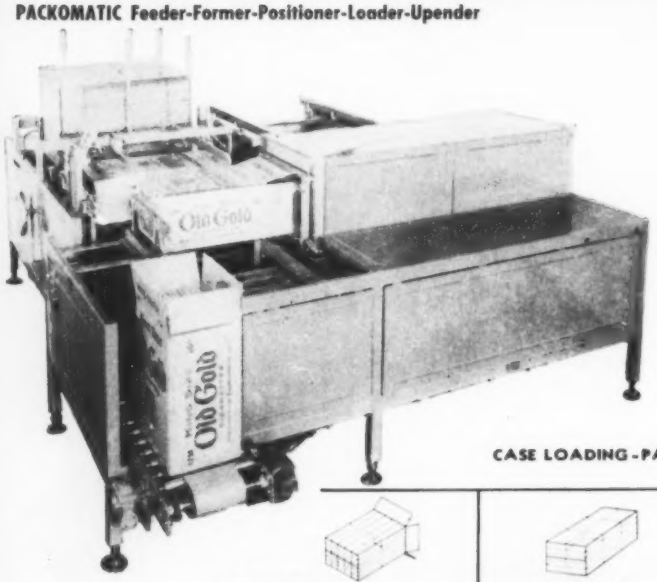
•

Export: Overseas Division, Sun Chemical Corporation L. I. C., N. Y.

Which Packomatic solves your production line problem?

T.M. Reg. U. S. Pat. Off.

PACKOMATIC Feeder-Former-Positioner-Loader-Upender



Require a fully automatic case loader?

Here's a fully automatic case Feeder-Former-Positioner-Loader that is breaking records on actual production line conditions in a variety of industries. And by end-loading techniques, savings on paper board alone run as high as 28%. Production jumps dramatically with this high-speed, continuous-motion machine. Labor costs are lower, too, because except for hand-stacking corrugated shipping containers in flat form into the magazine, everything's automatic. Below are some of the end-loading patterns showing number and packing of cartons. Check with Packomatic engineers if your loading pattern does not appear here. Custom-engineering will produce a Packomatic for your product.

CASE LOADING-PATTERNS:

Twenty-four cartons in 12½" x 10⅝" x 8½" case

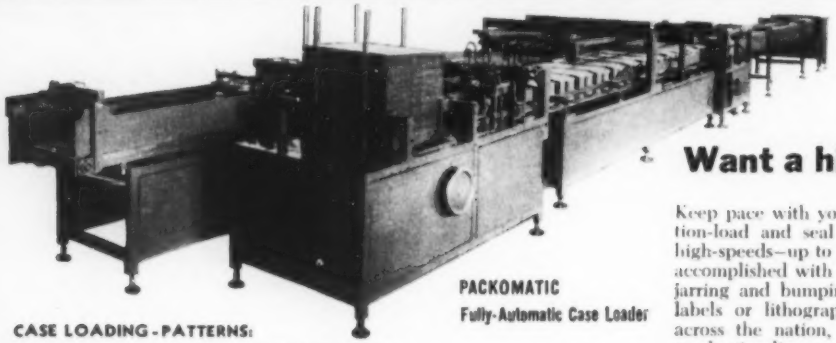
Eighteen 7 & 8 oz. cartons in 20" x 14⅛" x 8½" case

Sixty cigarette cartons
King size: 17⅞" x 11½" x 22"
Regular: 14 13/16" x 11½" x 22"

Thirty 1 lb. cartons in 16⅛" x 10⅛" x 7¼" case

Twenty-four cartons in 19½" x 10⅞" x 7" case

Forty-eight cartons in 22¾" x 23½" x 15⅞" case



PACKOMATIC
Fully-Automatic Case Loader

CASE LOADING-PATTERNS:

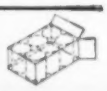
handles any can from the 12 oz. to the 5-qt. Imperial

Six 5-qt. cans or gallon cans in 20⅛" x 13⅜" x 9 13/16" case and 20¼" x 13¾" x 8¼" case

Twelve 46 oz. cans in 21" x 13" x 7⅛" case

Twenty four 12 oz. cans in 16⅛" x 10 1⅛" x 5⅛" case

Six No. 10 cans in 22 1/16" x 17⅜" x 7⅛" case



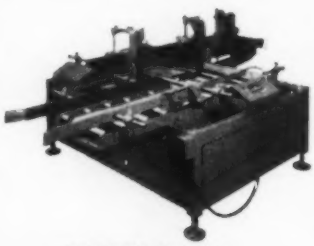
Want a high speed can line?

Keep pace with your production line. Now, feed-form-position-load and seal your corrugated shipping containers at high-speeds—up to 720 cans a minute—automatically. This is accomplished with a smooth continuous motion to eliminate jarring and bumping of cans that causes leakers and mars labels or lithographing. Machines in successful operation across the nation, (Packomatic was **first** with a successful production-line machine) end-load a variety of can sizes—from six 5-quart cans to twenty-four 12-oz. cans—in such patterns shown at left. End-loading reduces paper board costs. Automation saves labor costs. From corrugated flats to sealed containers, only one part-time attendant is required. Consider this time-money saver for your plant. We can custom-engineer a machine like this for you.

PACKOMATIC Automatic Case Sealer

Like to seal automatically?

Here's the machine for you — the **first** fully automatic case sealer proven under actual production line conditions. No operator needed to align corrugated cases, open flaps, glue, seal and discharge ready for shipment. Adjustable to a wide range of case sizes. Similar models, available semi-automatic.



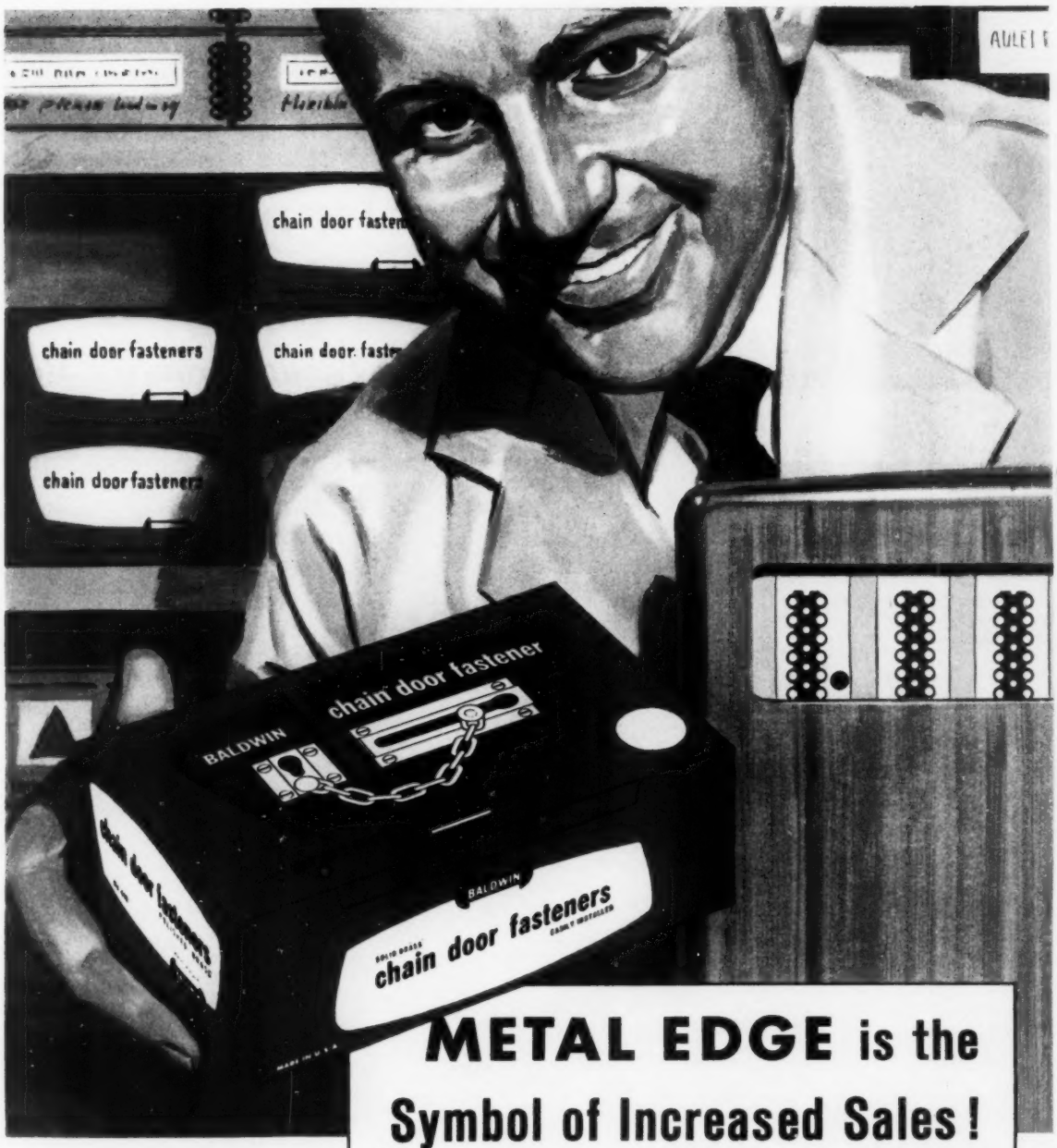
PACKOMATIC 4-Side Case Imprinter with serial numbering device.

Need 4-Side Imprinting

Prints either or both sides and ends of corrugated shipping containers with name and contents — in addition to imprinting a serial number. Very essential if using modern palletizing methods. The only machine of its kind. Other regular models available for minimum case imprinting requirements. Write for specs and prices.

J. L. FERGUSON COMPANY Joliet 3, Illinois

NEW YORK, CHICAGO, CLEVELAND, BOSTON, TAMPA, BALTIMORE, PORTLAND, DENVER, LOS ANGELES, SAN FRANCISCO, SEATTLE, NEW ORLEANS, LOUISVILLE, KANSAS CITY AND ALL PRINCIPAL CANADIAN CITIES.



METAL EDGE is the Symbol of Increased Sales!

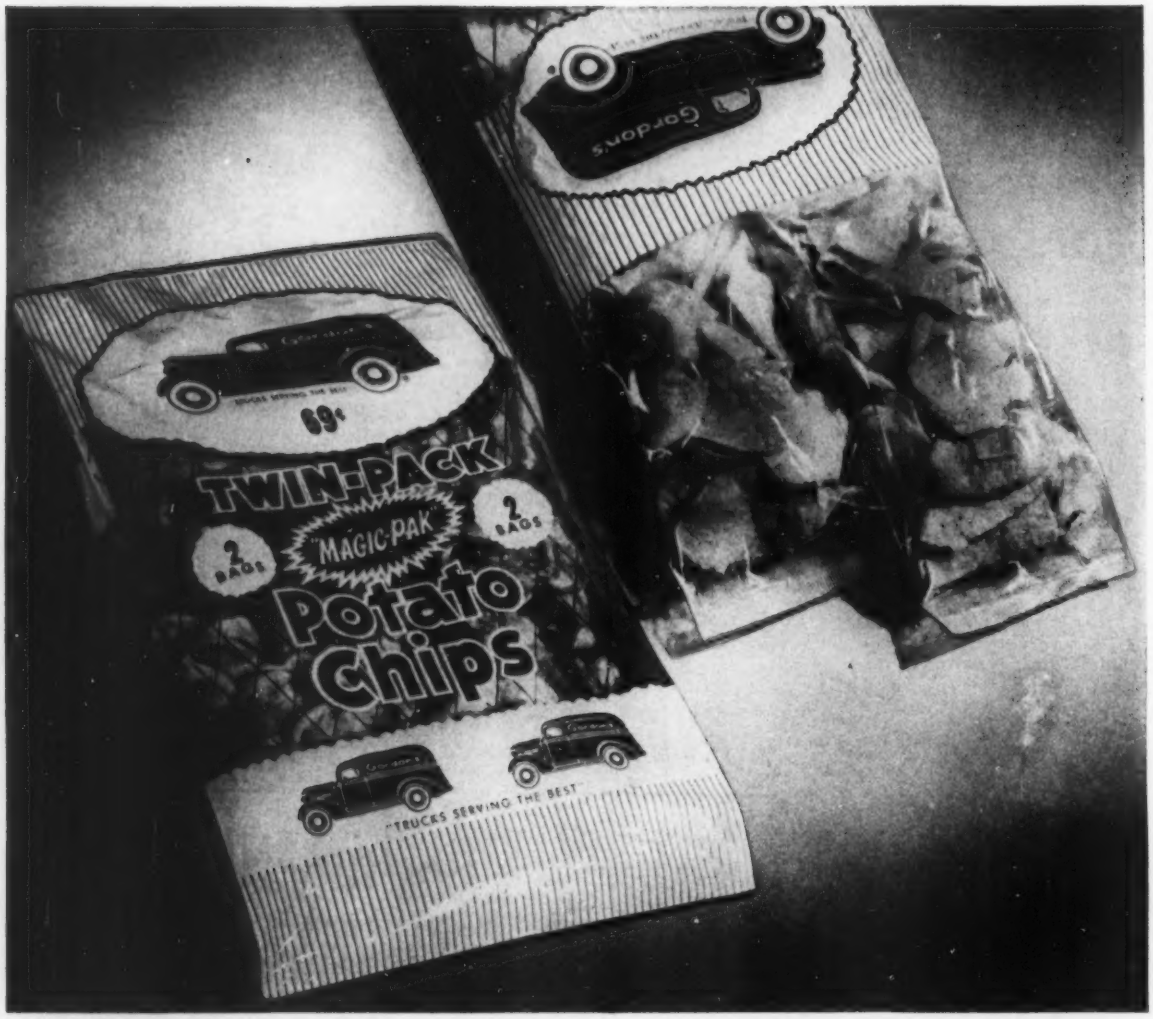
Before investing in new packaging, go into a store . . . any store where hardware is sold. A lion's share of the leading products, you'll see for yourself, move from the shelf in distinctive METAL EDGE BOXES.

A Metal Edge Packaging Engineer Can Help Solve Your Packaging Problems. There's no obligation. Just Write:

NATIONAL
METAL EDGE BOX
COMPANY
60 Gloucester Road • Barrington, New Jersey

Nothing sells your product like a transparent package . . . and

cellophane creates more sales



SALES APPEAL OF CONVENIENCE. Gordon Foods, Inc., Atlanta, Ga., gives its customers double assurance of freshness protection. One of the most popular items in the Gordon line is the "twin-pack" fractional package . . . two separate bags inside a sparkling printed Du Pont cellophane bag. Chip lovers can eat half the contents while the flavor and crispness of the other half remains protected in cellophane.

In today's highly competitive markets, only a transparent package works so hard to sell your product. And only a package of versatile, crystal-clear cellophane offers you so many features that create real sales appeal!

Du Pont cellophane shows the fine products you make at their very best . . . protects and keeps them at the peak of freshness . . . helps you increase volume through smart packaging techniques keyed to consumer convenience.

And . . . of course . . . cellophane has no equal for smooth, high-speed packaging at low cost. To find out more about how a package of Du Pont cellophane can help you sell your products better, contact your Du Pont Representative or Authorized Converter of Du Pont cellophane. E. I. du Pont de Nemours & Co. (Inc.), Film Department, Wilmington 98, Delaware.

SPECIFY DU PONT *cellophane by code designation when you order. That way, you'll be assured highest-quality film, product of Du Pont research and experience. Du Pont manufactures over 100 varieties of cellophane to meet your particular packaging needs.*

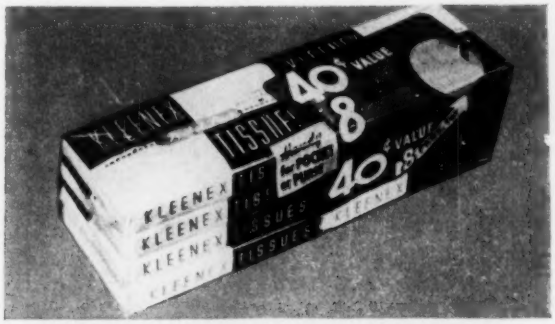
DU PONT
REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

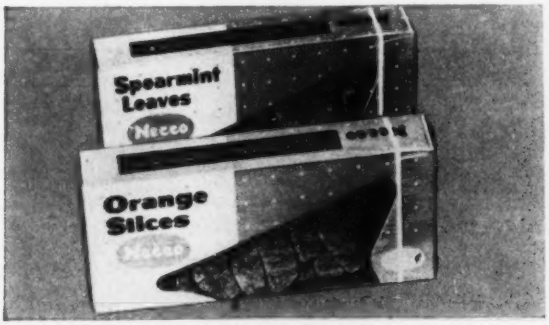
appeal . . . more ways than any other packaging material

Du Pont cellophane offers you all these packaging and selling advantages

SALES APPEAL OF VISIBILITY. Leading bakers, like the Fischer Baking Co., Newark, N. J., know that bread sells better when it can be seen. That's why the sale of 100% clear cellophane for white bread is increasing at an average rate of 25% a year.



SALES APPEAL OF MULTIPLE PACKAGING. Kimberly Clark Corporation, Neenah, Wis., knows that smart shoppers like to economize . . . now sells far more Kleenex Tissues by packaging 8 individual pocket packs in sparkling, printed Du Pont cellophane.



SALES APPEAL OF QUICK OPENING. The New England Confectionery Co., Cambridge, Mass., adds convenience to taste appeal . . . makes it easy for candy buyers to enjoy their favorites with efficient cellophane tapes that quickly, neatly open the package.

SALES APPEAL OF PROTECTION. Long Island Banana Co., Richmond Hill, N. Y., reports 2 to 3 days' extra selling life . . . greatly reduced banana bruising since adopting a printed Du Pont cellophane overwrap. A product stays fresh, looks clean in cellophane.

DU PONT cellophane

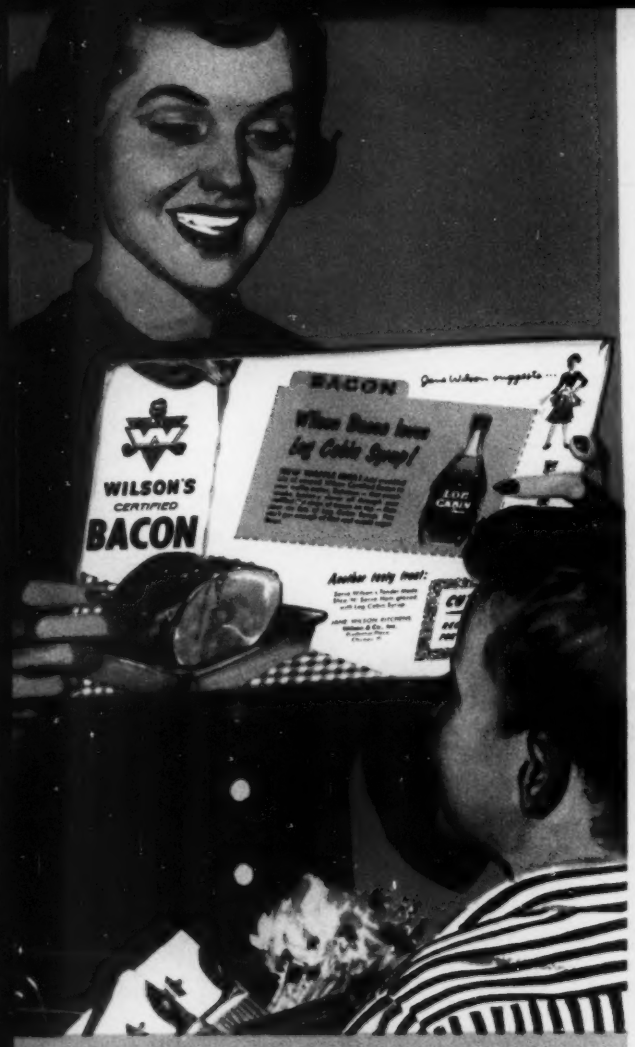
leading the packaging field for 33 years
. . . designed for the needs of the future

When looking for packaging information

which executive are you?

Remember,
if you're a Modern Packaging subscriber,
your new Encyclopedia Issue—the all-in-one purchasing tool, production help and "idea bank"—
is on your shelf.
So—help yourself!

PACKAGING SUPPLIERS: Because the Encyclopedia is the *only* standard reference annual in the field, the *single* ad you place in it works for you a full 52 weeks a year!



WILSON & CO. SELLS ON

two sides of every package

WITH APPETITE-APPEAL BY

Milprint* INC.
PACKAGING MATERIALS

general offices, Milwaukee Wisconsin, sales offices in principal cities

printed cellophane, pliofilm, polyethylene, saran, acetate, glassine, vitafilm, "mylar"®, foils, laminations, folding cartons, bags, lithographed displays, printed promotional material.

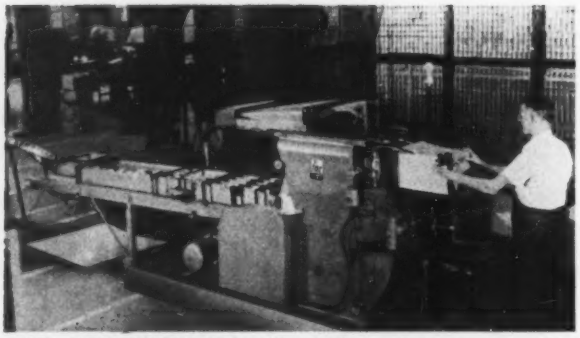
Wilson & Co. Bacon goes to market wrapped in sales appeal—thanks to life-like, eye-catching, colorful serving suggestions precision-printed by Milprint on *both* front and back of these lithographed bacon boards. Convenient recipe copy, cross promotions on other Wilson items and special promotions also appear to help these packages do a double selling job as long as there's a customer in sight!

Winning bigger sales with your packaging dollar is an old custom at Milprint—where you'll find the widest variety of packaging materials and printing processes available anywhere. **Be sure you call your Milprint man—*first!***

*Reg. U. S. Pat. Off. This insert lithographed by Milprint, Inc.

DOES YOUR PACK SUFFER *Bowling Ball Impact?*

Time to replace with a New Improved FMC NON-SHOCK CASER —so *Smooth and Gentle* to Cans and Contents



FMC's NON-SHOCK CASER "babies" cans into cases at a fast clip, limited only by the speed of the operator.

—even at speeds up to 1200 cases per hour!

Old methods of casing no longer meet the requirements of spoilage-free, high-speed operations—especially where loosening can seams of high-vacuum packs is a problem. The new Model 3 FMC Non-Shock Caser, with all its exclusive features for big capacity and gentle handling, really "delivers the goods" to the case completely free of damaging impact to cans, labels or product. Compact and flexible, machines are built to handle specific can sizes and certain combinations from 202 x 308 packed 6 x 8, to 603 x 700 packed 2 x 3.

Remember: There are extra dividends when you care for your cans all the way to the case – with an FMC *Non-Shock* Caser!

NO ROLLING—NO NEAR SEAM IMPACT
Cans enter the machine *upright*, move smoothly along woven wire belt, are transferred gently to the case.

NO CAN ELEVATOR REQUIRED
Cans are delivered to the continuous feed belt through a 90° twister, avoiding the seam-splitting action of steep gravity-roll contact.

FREE BULLETIN AVAILABLE
Fully illustrated Non-Shock Caser bulletin is yours for the asking. Better yet, call your FMC representative today for complete information!

Putting Ideas to Work

FOOD MACHINERY AND CHEMICAL CORPORATION

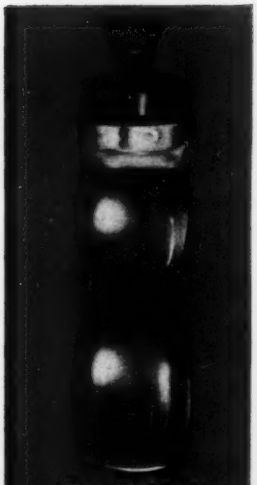
Canning Machinery Division

General Sales Offices:

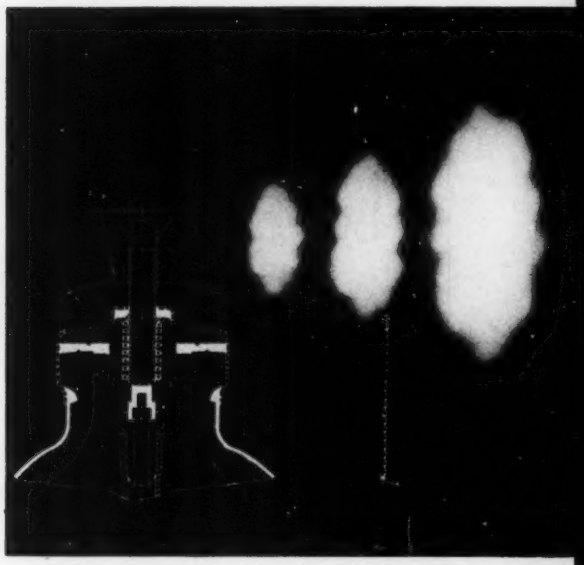
WESTERN: SAN JOSE, CALIF. • EASTERN: HOOPESTON, ILL.

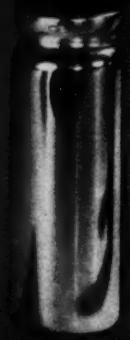
Creating New Horizons
In Cosmetic And
Pharmaceutical Packaging

RISDON METERED SPRAY AEROSOL VALVES



For Coated Glass Containers





For Metal Containers

Creative research has made the Risdon metering valve another facet of Risdon's leadership in aerosol product dispensing.

You will find it in use on exquisite containers dispensing measured amounts of many of the best known perfumes. And in the pharmaceutical field, its ability to deliver the various pre-measured dosages desired, through special applicator-actuators, is opening new aerosol product possibilities.

It is available with either standard or patented Risdon "Micro-Mist" actuators, permitting unprecedented formulation latitude.

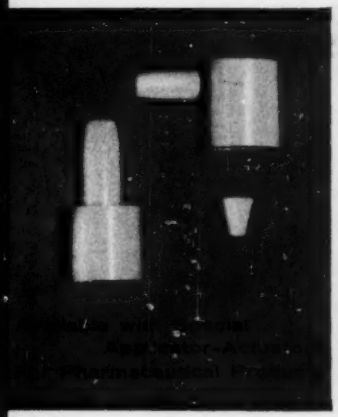
To serve your aerosol dispensing requirements Risdon offers technical advice and assistance plus extensive research, testing and quality control facilities and a fund of successful experience in the production of valves for a wide range of products.

For further information on Risdon metered-spray or conventional spray valves for glass, metal or plastic containers, contact Risdon today.

THE RISDON MANUFACTURING CO.

Valve Division, Naugatuck, Conn.

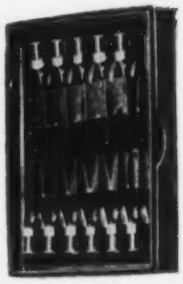
For Combination Glass & Metal Containers



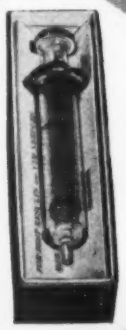
RI-96

ROWELL BOXES

High in quality...
production
to meet your need



Set-up boxes in a wide range, made for Cosmetic & Drug Trade throughout the United States. Inquiries also invited from box users in other lines.



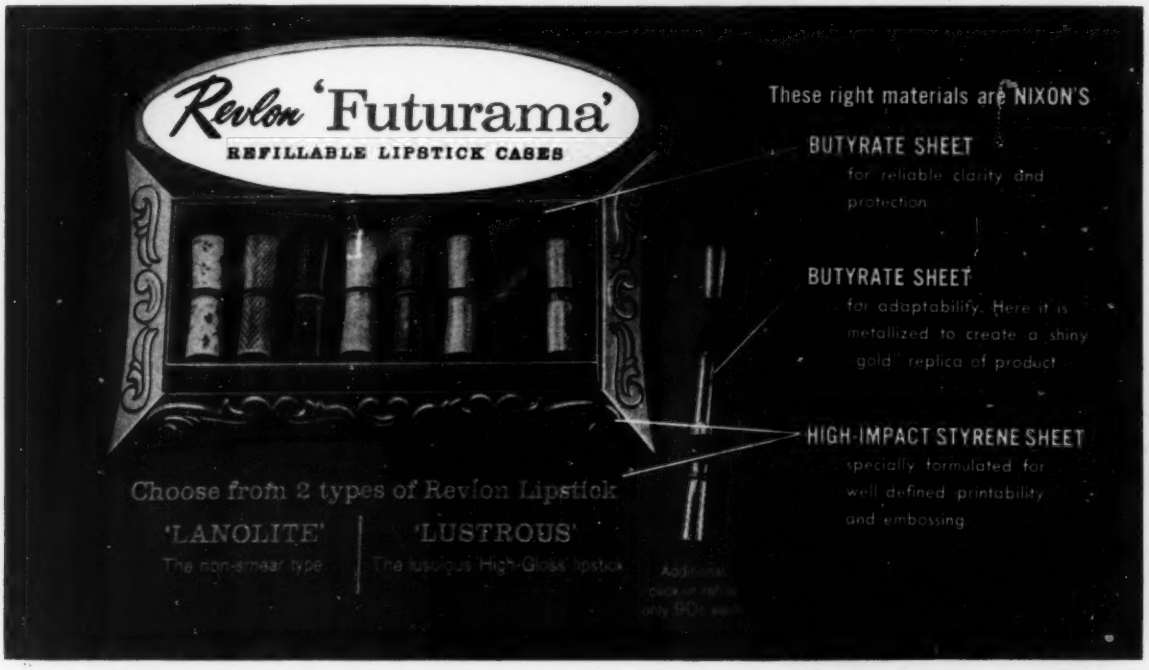
E. N. Rowell Co.
INC.
BATAVIA, NEW YORK

EVERYTHING CLEAR BUT THE COST!

SKILLFUL USE OF TWO NIXON PLASTICS ACHIEVES ELEGANT LOOK AT A LOW PRICE

One glance tells the whole story — product name, function and price. *Only the nominal cost of fabricating the whole is hidden.*

This new setting for a famous product proves how striking and functional merchandising can be and still be economical. But to accomplish this the most ingenious designer and manufacturer need to start with the right materials.


Revlon 'Futurama'
REFILLABLE LIPSTICK CASES
These right materials are NIXON'S
BUTYRATE SHEET
for reliable clarity and protection
BUTYRATE SHEET
for adaptability. Here it is metallized to create a shiny gold replica of product
HIGH-IMPACT STYRENE SHEET
specially formulated for well defined printability and embossing
Choose from 2 types of Revlon Lipstick
'LANOLITE'
The non-smear type
'LUSTROUS'
The lustrous High-Gloss lipstick

Want some bright new ideas for your product? Why not begin by consulting the experts at Nixon Plastics. Their long experience in the perfecting of all thermoplastics makes them a logical source for rigid packaging and display.

Display-dispenser manufactured by *Majestic Creations, Inc., Woodside, N. Y.* One operation vacuum forms the gold-sprayed embossed frame, pre-printed oval and gray styrene base. Pilfer-proof clear acetate window and replica of lipstick case are also vacuum formed. Replica is butyrate sheet metallized by *Coating Products, Englewood, N. J.* Entire assembly is laminated to sturdy kraft cardboard. Back section opens for removal of lipsticks. Designed by *Stanley Sussman, N Y.*, for Revlon

YOUR SOURCE FOR EVERY KIND OF FINE FORMABLE SHEETING

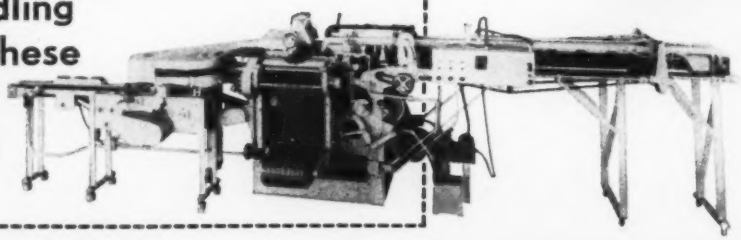
nixon PLASTICS

NIXON NITRATION WORKS • FOUNDED 1898 • NIXON, NEW JERSEY

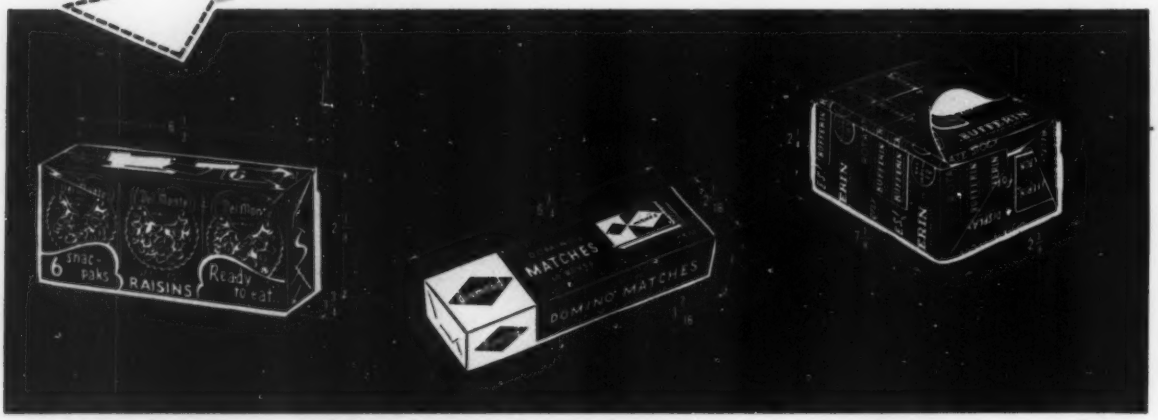
Phone — New Brunswick Charter 9-1121, Metuchen Liberty 9-0200, New York Ext. WOrth 4-5290. **Chicago Office,** 510 No. Dearborn St., Michigan 2-2363. **St. Louis,** C. B. Judd, 3687 Market St., JEfferson 5-8082. **Cleveland,** E. H. Alexander, 20605 Kings Highway, Wyoming 1-2863. **Leominster, Mass.** C. A. Dovidio, Phone 7-2120. **Canadian Distributor:** Crystal Glass & Plastics Ltd., 130 Queens Quay East, Toronto, Ontario.

The Battle Creek Packaging Machine Model 48

has handled bundling problems within these ranges at speeds up to 60 bundles per minute

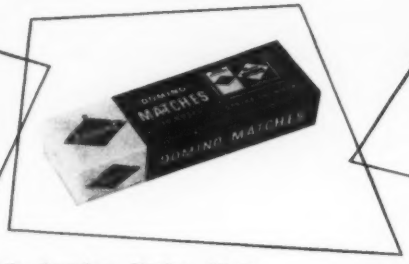


See us at booth No. 406

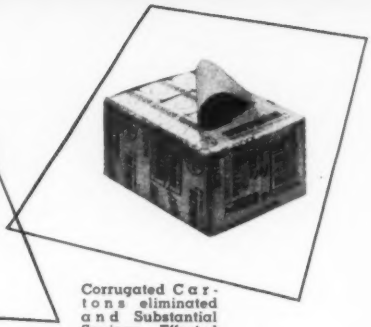


to produce packages like these

480 Individual Raisin Packages Group Wrapped Per Minute by Battle Creek's *"Continuous Flow"* Process.



Strike Anywhere Matches Attractively Group Wrapped for Impulse Sales.



Corrugated Cartons eliminated and Substantial Savings Effected by Bundle Wrapping 12 Packages of Drugs.

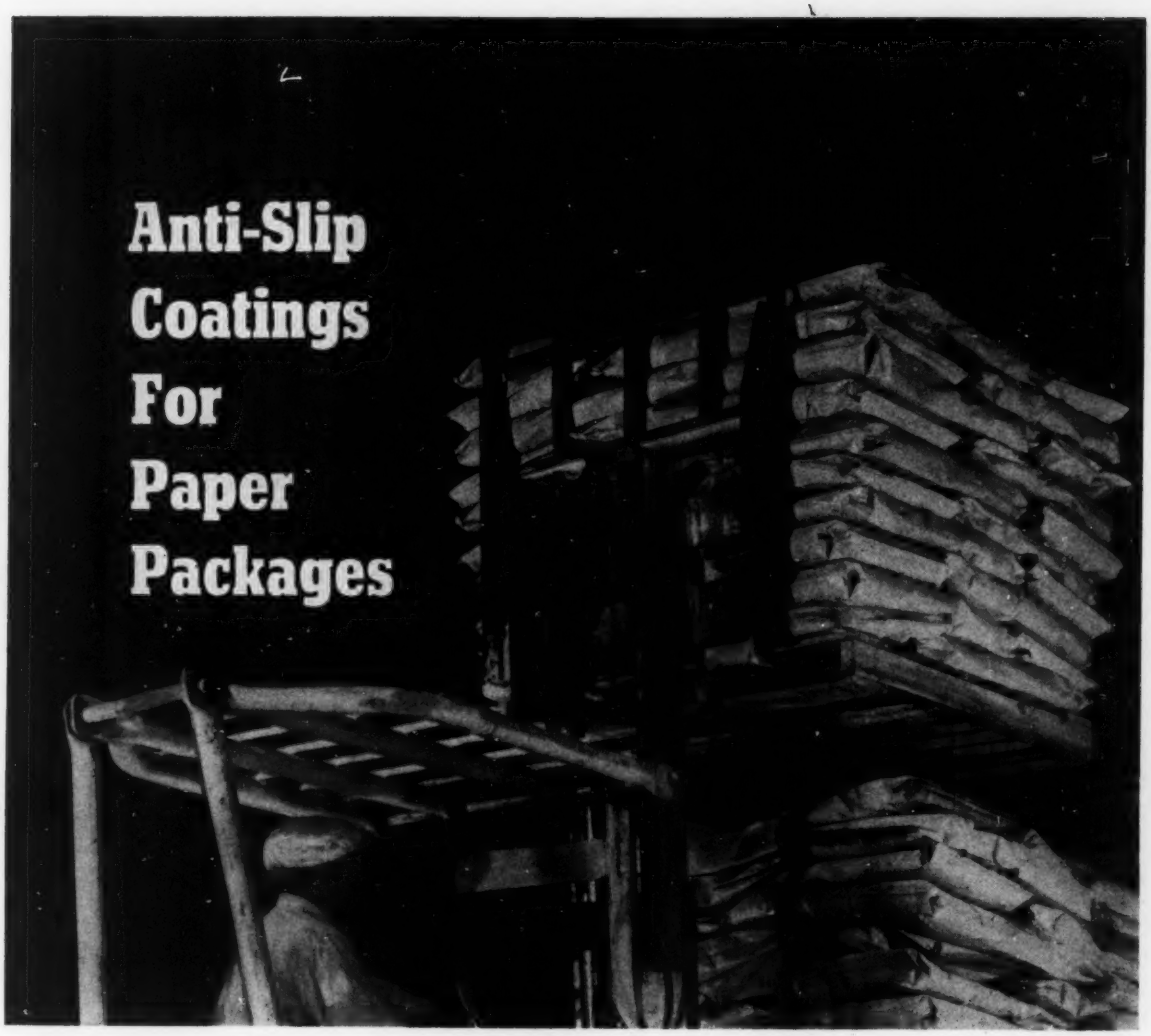
CUSTOM DESIGNING

Model 48 — This specialized machine is 'tailored' to your small package group wrapping problems. Where automation is the objective; the smooth, vibrationless *"Continuous Flow"* process can be easily adapted. Typical users who buy the Model 48 bundling machine include manufacturers of drugs, matches, food processors . . . those whose production demands fast-trouble-free group wrapping at lower costs per package. In one case involving the wrapping of 1½ oz. raisin packages, two alternating accumulating devices each delivered 40 units of six (240 individual items) per minute to the Model 48 for wrapping at a speed of 80 groups (480 single packages) per minute. Other applications are equally dramatic, and the savings, equally valid. At one end of the scale the Model 48 handles maximum lengths of 12", widths of 7½" and heights of 4½." At the other end — minimum lengths of 6¼", widths of 2" and heights of 2" utilizing kraft, book, sulphite papers or others requiring glue for sealing purposes. Conversion from one size to another is quick, easy . . . with changeover time averaging about 30 minutes.

Call on Battle Creek Packaging Machines today, for complete service on your bundling problems.

"Continuous Flow" Packaging

BATTLE CREEK
packaging machines, inc.
102 TWELFTH STREET, BATTLE CREEK, MICHIGAN



Now smooth bags and cartons stack solidly, safely when treated with Du Pont LUDOX®

Today, your paper packages can be safer and better-looking than ever, thanks to Du Pont "Ludox" colloidal silica. Coatings containing "Ludox" give smooth paper surfaces excellent anti-slip characteristics . . . increase surface friction so that treated bags and cartons can be handled safely . . . stacked neatly and securely.

Better still, using smooth paper enables you to take advantage of a superior printing surface. Thus, your labeling is easier to apply, looks attractive. And the top coating of "Ludox" helps reduce ink smudging and smearing.

For paper packaging materials that combine the safety of anti-slip with the advantages of a smooth surface, specify treatment with a coating containing Du Pont "Ludox."

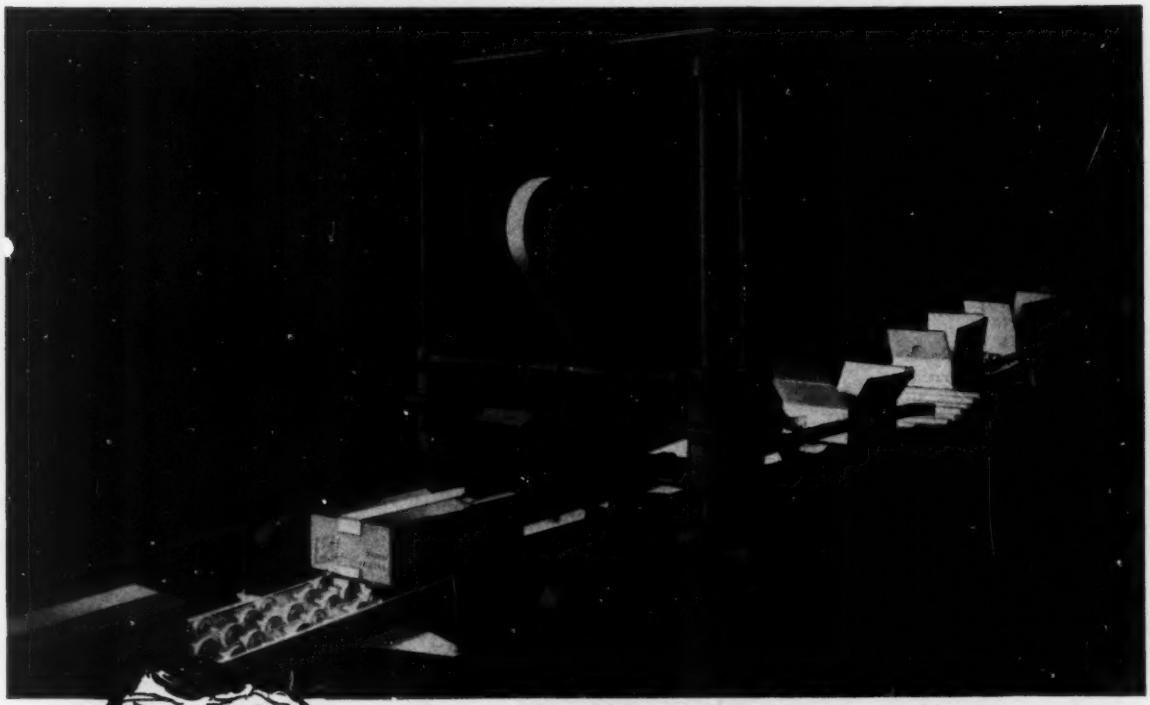
DU PONT
REG. U.S. PAT. OFF.
BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

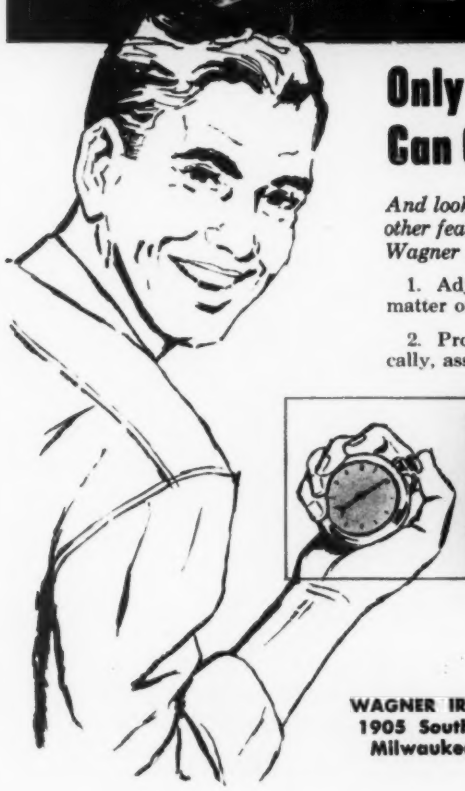
LUDOX®
COLLOIDAL SILICA

LABELS OR TAGS
NEW ERA PRESS
PASTR
EXTRA CHOICE
BAG HEADERS, TICKETS, FORMS
and many other products can also be completed on a single run on one New Era Press. Bulletin tells all about it!
Quality
Facial Tissue Napkins
Softer than Soft
25¢
NEW ERA
BIG BOY

Only Machine that Automatically Tapes Over 2000 New or Re-use Cartons Per Hour

...and reduces labor costs as much as 80%, too!





Only the WAGNER M-20 Can Guarantee Performance Like That

And look at just a few of the other features built into every Wagner M20—

1. Adjusts to any carton size in a matter of seconds, not minutes.

2. Proper tape length cut automatically, assures neat cartons every time.

3. Exclusive wipe down and compression assembly.

4. Rugged construction assures many years of trouble-free service.

It will pay you well to get complete information about the most modern taping machine on the market today.

waqner M-20 TAPING MACHINE

WAGNER IRON WORKS
1905 South 1st Street
Milwaukee, Wisconsin

MAIL COUPON TODAY FOR FULL INFORMATION

WAGNER IRON WORKS
Milwaukee 1, Wisconsin

Please send complete information about the Wagner M-20 Taping Machine

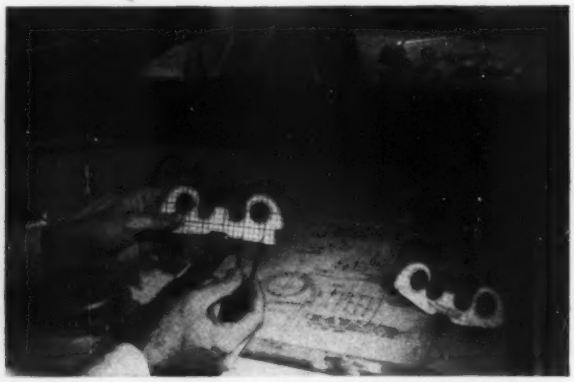
NAME .....

ADDRESS .....

CITY .....

How J. L. CLARK helped Scotch Brand Cellophane Tape become a household word with an easy-to-use, safe dispenser

In the early '30's, Minnesota Mining & Manufacturing Company introduced its rolls of now famous Scotch Brand Cellophane Tape. Foreseeing a brilliant future for the product if it could be made handy to use, the company originated the dispenser idea . . . called in J. L. Clark to make it practical, safe, inexpensive, and provide instant brand recognition.*



The development of special structures was a Clark specialty . . . still is. Clark engineers created and perfected the mechanical design of the special dispenser structure; provided for safe rolled-edges and clean tape tear-off in a multiple-stage manufacturing process unlike anything previously known.

Faithful lithographic reproduction of the Scotch Brand plaid, now so well known to America, is the subject of rigid quality control methods at Clark. With each new dispenser for specialized tapes, 3M and Clark collaborate fully in developing new artwork, precision plates and exact colors which will insure the distinctive family resemblance of Scotch Brand packages.

High speed manufacturing processes, using Clark-designed and Clark-built dies, produce millions of dispensers held to close tolerances without marring of decoration. This is the kind of creative packaging that has helped Scotch Brand become a household word . . . the kind of work we would like to do for you.

*Upper left photograph, left to right, C. O. Moosbrugger, Advertising Director, Minnesota Mining and Manufacturing Co., J. G. Martin, J. L. Clark Representative, R. L. Sheppard, Sales Manager Retail Tape Division and C. B. Sampair, Executive Vice President, Minnesota Mining and Manufacturing Co.

a businessman's guide to container design
A booklet you'll want to see and study, one that can be the important first step toward putting your product front-row-center on any shelf! It discusses Design Impact, Structures, Psychology of Color and Merchandising opportunities. Send for a copy—today!

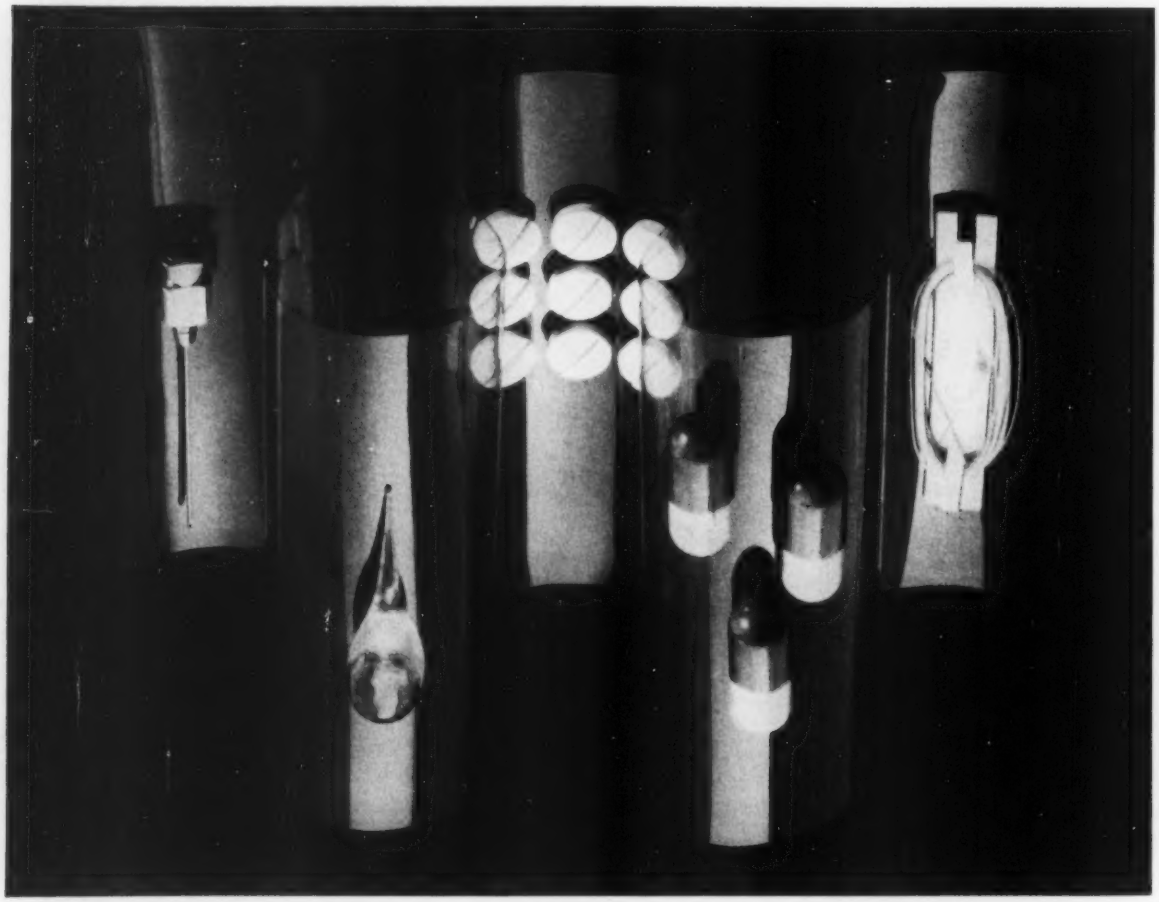
Lithographed Metal Containers

J. L. CLARK

J. L. Clark Manufacturing Co., Rockford, Ill.; Liberty Division Plant and Sales, Lancaster, Pa.; New York Sales Office, Chrysler Bldg., New York 17

CLARK containers put your products where you want them!

3M Chemicals opening new worlds of use for film



A radically new solution to pharmaceutical packaging problems . . . KEL-F® films

unplasticized, plasticized and radiant-resistant grades

Now film can compete with any packaging material and win . . . especially on tough pharmaceutical packaging jobs.

The reason? A totally new, virtually indestructible type of packaging material . . . films made of KEL-F® trifluorochloroethylene polymer.

There is no other film that comes close to offering the unique combination of exceptional properties listed on the right. KEL-F films do. Think of them in terms of your products!

With KEL-F films, packaging opportunities for chemicals, ethical drugs and surgical supplies, or any valuable or delicate merchandise, are unlimited.

Check these unique features against your most exacting needs!

- Exceptional chemical inertness—eliminating contamination of contents or corrosion of package, even by the strongest acids or alkalis.
- Grade 500 incorporates unusual radiation resistance—will withstand sterilization up to 25 megareps before becoming brittle.
- Complete impermeability—zero moisture absorption, zero moisture vapor passage.
- Extraordinary anti-sticking properties—package drains thoroughly.
- Extreme clarity—complete and lasting visibility of contents.
- Non-brittle—will not shatter.
- High tensile strength—assuring full protection of contents.
- Complete resistance to age, fungus and decay.
- Can be heat sealed, radio frequency sealed and vacuum formed.
- Extremely flexible—retains high pliability over temperature range from —65°F. to +350°F.
- Excellent electrical properties.
- Light weight—minimizes package size and weight.

Investigate film made of KEL-F trifluorochloroethylene polymer (a 3M chemical product) by leading film manufacturers! Contact Jersey City Chemical Division, Chemical Products Group, 3M Company, Dept. WA18, St. Paul 6, Minnesota.

3M COMPANY CHEMICALS

Jersey City Chemical Division • Chemical Products Group

MINNESOTA MINING AND MANUFACTURING COMPANY

St. Paul 6, Minnesota

THE NEW CLEVELAND PLASTIC CLOSURES

lock in Sift, Pour and Closed Positions

Made of high grade polyethylene plastic . . . these new Cleveland Container closures "snap lock" in sift, pour and closed positions. Their attractiveness will definitely call attention to your products.

Self cleaning, as turned from one position to another, prevents build-up of contents of the can between top and closure. Their "kind to the fingers" turning action will win consumer acceptance.

The larger size is ideal for packaging flour, baking powder, bread crumbs and similar products . . . smaller size for spices, herbs, medicinal powders, etc. Available in colors at small additional cost.

Let our design engineers work with you in adapting these new closures to your products. Just call or write our nearest plant.

VARIETY AND VERSATILITY

Illustrated at the left are two variations in the use of the plastic closure. One shows the closure in modified form used with an all metal spice can. Closure is furnished where large quantities apply.

The round container of fibre body construction shows the same plastic closure for the top and a friction plug for the bottom. This permits easy filling for smaller quantities.

Closure permits use of spoon for measuring and, of course, is used with tamperproof undertop.

Why pay more? For quality products . . . call CLEVELAND!

WRITE for your copy of our latest Packaging Brochure.

THE CLEVELAND CONTAINER COMPANY

6201 BARBERTON AVE., CLEVELAND 2, OHIO

PLANTS AND SALES OFFICES: CLEVELAND, DETROIT, CHICAGO, MEMPHIS, LOS ANGELES, PLYMOUTH, WIS., JAMESBURG, N. J., ODDENSBURG, N.Y. • ABRASIVE DIVISION CLEVELAND

SALES OFFICES: NEW YORK CITY, WASHINGTON, D. C., ROCHESTER, N. Y., WEST HARTFORD, CONN.

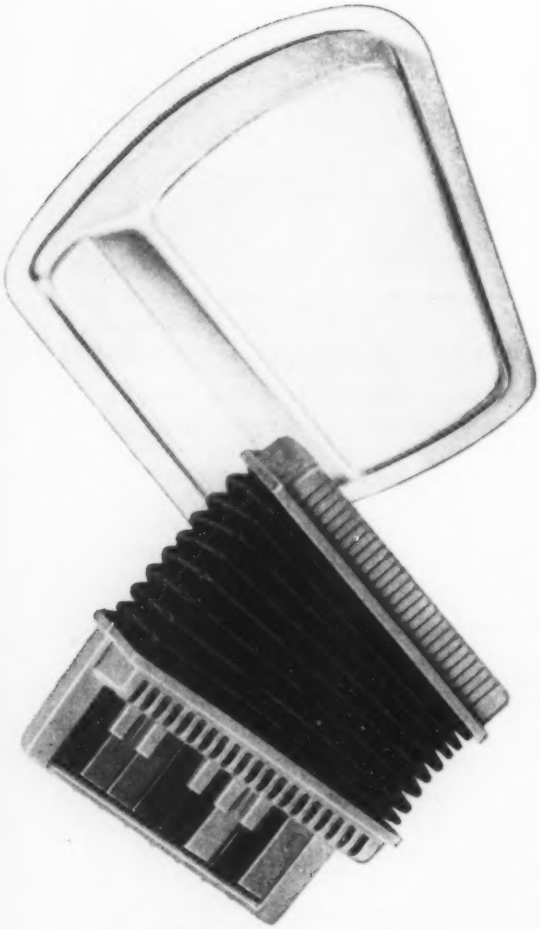
• ALL-FIBRE CANS • COMBINATION METAL AND PAPER CANS • SPIRALLY WOUND TUBES AND CORES FOR ALL PURPOSES

CLEVELAND CONTAINER CANADA, LTD.
Plants & Sales Offices: TORONTO AND PRESCOTT, ONT.
Sales Office: MONTREAL

TOP MERCHANDISERS AGREE

you get a lot more by vacuum-forming with Celanese acetate sheeting

- **protects merchandise**
- **gives full product visibility**
- **displays products to their best advantage**
- **stimulates buying**
- **is economical**
- **ideal for formed displays, contour, blister and skin-formed packaging**



Emenee Accordion package by Emet Plastics Corp., Bronx, N. Y.

All these packaging advantages... that's why top merchandisers prefer Celanese acetate sheeting for vacuum-forming. Acetate's transparency, toughness and exceptional sales appeal, plus its unique adaptability to deep draws, make it ideal for the production of vacuum-formed packaging for practically any type of product. Get the complete facts from the Celanese Sheeting Department. Use coupon below.

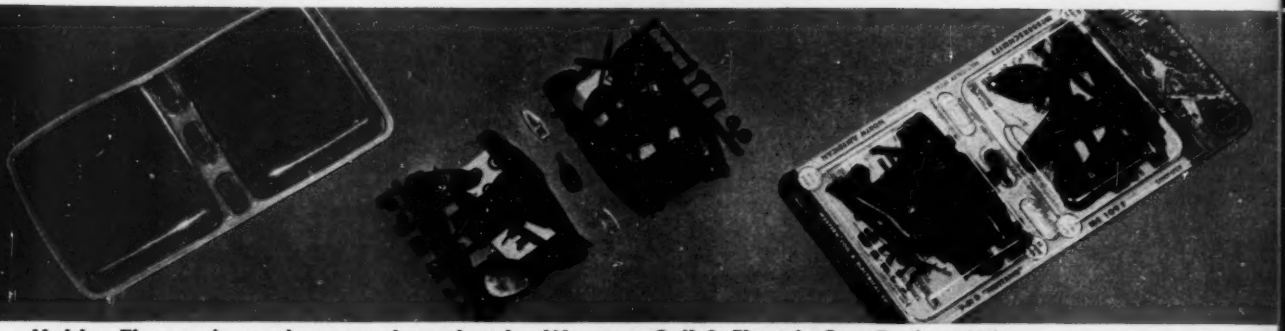
Celanese®

Celanese PLASTICS

Celanese Corporation of America, Plastics Division, Newark 2, New Jersey.

Canadian Affiliate: Canadian Chemical Co., Limited, Montreal, Toronto, Vancouver
Export Sales: Amcel Co., Inc., and Pan Amcel Co., Inc., 180 Madison Avenue, New York 16, N. Y.

Wearever Refill package by Plastic Artisans Inc., Port Chester, N. Y.



Hobby-Time twin-package and product by Western Coil & Electric Co., Racine, Wis.

Majestic Windshield Wiper package by William A. Crook Company, Watertown, Mass.

E-Z-Lift blister package by Ve-Alite Plastics Corp., Brooklyn, N. Y.

Celanese Corporation of America, Plastics Division
Dept. 108-A, 744 Broad Street, Newark 2, N. J.

Send me vacuum and pressure forming information.

NAME _____ TITLE _____

COMPANY _____

ADDRESS _____

CITY _____ STATE _____

Application I have in mind _____

A Question of Science ?

Fish, fruit and vegetables in aluminium foil packs? Maybe not today —but tomorrow? It is simply a question of science. Smooth, streamlined living demands hygienic treatment of our food—supplied without dirt, fungus or scales.

Constant scientific research on applications of aluminium foil reaches out to embrace not only food but building, engineering and electrical industries.

Star Foil is backed by the most modern equipment—Technical and Laboratory services are handled by men with 25 year's experience of research on foil, coatings, inks and laminates.

The equipment and experience is at your service.

Star Foil

from EUROPE'S MOST MODERN FOIL MILLS Widths Up To 40½" Condenser Foil from ·0045 mm. Thick.

STAR ALUMINIUM COMPANY LIMITED
WOLVERHAMPTON & BRIDGNORTH, ENGLAND.

AGENTS: NORCA CORPORATION, EMPIRE STATE BUILDING, 350 FIFTH AVENUE, NEW YORK 1, N. Y.
CABLE: NORCACORPO, NEW YORK . . . TELEPHONE LONGACRE 4-7225-6-7-8-9

STEIGERWALD

SENSI-STICK

LABELS

Pressure Sensitive

NO GLUE!

Easy as 1, 2 to Apply!

NO CLEANUP!

PERMANENT OR REMOVABLE

Easy to Apply . . . Sure to Stick!

Gone is the glue pot! Gone is water! Steigerwald Sensi-Stick pressure sensitive labels eliminate forever old-fashioned start-up and clean-up labeling machine jobs.

Sensi-Stick simplifies labeling to a 1, 2—pick and stick quick way—Individual labels or Dispenser automatically feeds individual labels on a tape ready for rapid application.

Economical — Faster
Better for all surfaces

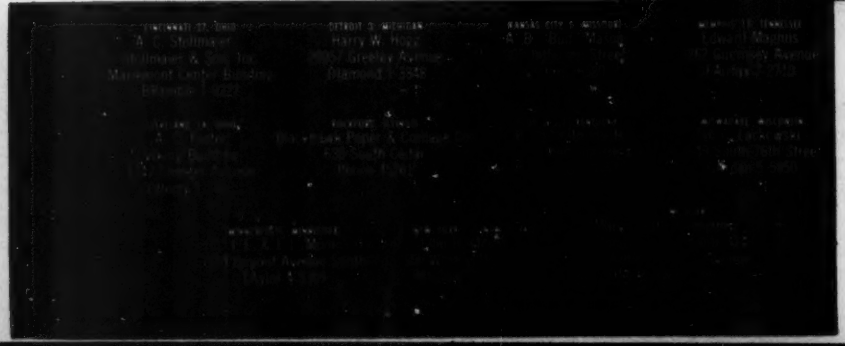
Steigerwald Sensi-Stick labels hold securely on all surfaces —won't buckle, curl or rub off even where others fail and nothing else will hold—choice of permanent or easy-to-take-off, surface safe adhesives.

Beautiful designs

Reproduce your present label just as it is on Sensi-Stick or consider a new design with a choice of gold or silver foil, embossed; lustrous papers and sparkling inks to add an extra note of quality to your product. Use Sensi-Stick to show you the way to the world's fastest hand labeling operation.

Labelsmiths

Today!



A. M. STEIGERWALD CO.

910 W. Van Buren Street
Chicago 7, Illinois
TAylor 9-5400

Paper Needs the "Touch of Talent"

Eighteenth century Japanese paper, made by hand from mulberry bark, was beautiful but of little worth without the touch of talent . . .

. . . but the skill of Harunobu transformed it into wonderfully colored wood-block prints, most of which are in museums today.

The end value of a paper product lies in the talent that produces it...whether designed for a museum, or a more practical commercial purpose.

NASHUA Corporation

NASHUA TALENTS AVAILABLE TO YOU . . . Creative Design • Paper Chemistry • Package Engineering Coordinated Packaging • Quality Production • Procurement Versatility . . . Nashua Corporation, Nashua, N. H.

MODERN PACKAGING

Vol. 31, No. 5 January 1958

Featured in this issue . . .

Packaging 1957: a guide to '58

Significant packaging developments of 1957 will be put to work in 1958 by packagers in the drive for better marketing and selling. 1957 was the year in which aluminum cans appeared . . . polyethylene film became significantly cheaper than cellophane . . . aerosols opened a wedge into the food field . . . squeeze bottles with plastic linings broke the permeability barrier . . . fluorocarbon film made its debut as a packaging material . . . and an important trend toward wrapless, linerless thermosealed cartons got under way.

Don't miss "Turn of Year," p. 87

Polyethylene film and the high-speed-overwrapping problem

Polyethylene film's built-in qualities of texture, strength and long service life suddenly make it important as an overwrap candidate, now that divergent price trends have placed it lower in cost than cellophane. But still it isn't ready for high-speed overwrapping applications. The biggest stumbling block has been the problem of heat sealing, for polyethylene is a thermoplastic material and is critically meltable when subjected to the intense heat needed to weld the multiple thicknesses of overwrap folds. In this *second article of a series* (see Dec., 1957, p. 98), MODERN PACKAGING explores the alternatives to heat sealing—adhesives and coatings—and reveals what the materials producers are doing to solve the problems that stand in the way of polyethylene film as the No. 1 overwrap material.

See "What About Polyethylene?" No. 2, p. 130

Improved film gives baked goods a new lease on shelf life

With the recent solution of technical problems as the springboard, polymer-coated cellophane leaps into prominence as a packaging material with superior protective properties. Because it is exceptionally resistant to penetration and degradation by fats and oils, this one-time "packaging curiosity" now finds increasing application by bakery-goods producers. The strong, sparkling-clear film enhances the appearance and greatly increases the distribution range of conventional baked goods and protects the looks and quality of frozen baked products. Bakers and other manufacturers of high-fat products credit the film with boosting sales as much as 30%, extending shelf life up to 50%.

Turn to "Better Film for Baked Goods," p. 124

Why 7-Crown sports an aluminum cap

Wherever molded-plastic closures are used in high-speed bottling operations there will be great interest in Seagram's new cap for 7-Crown Whiskey—the first concealed-thread, completely pre-fabricated aluminum bottle closure. The lacquered, fluted closure looks like a molded-plastic cap, but it is unbreakable and its double-wall construction locks the closure liner in place—a combination that virtually eliminates leakers and breakage.

See "A New Aluminum Closure," p. 92

Economical packaging in exact-count quantities

Atlas Tack Co. had a problem: How to cut costs and speed the packaging of carefully counted fasteners, custom packed for inclusion by other manufacturers in do-it-yourself kits? The lack of a nail could be serious. The company's solution was to scrap its 147-year-old former operation—hand packaging in pre-formed envelopes and folding boxes—

and substitute two fast, flexible pouch packers equipped with counting attachments that turn out accurate code-printed packages at rates of up to 5,400 packages per hour each. And packaging costs are down 66% to 72%.

Read "No Want of a Nail," p. 94

Foil containers: heat-and-eat is just the beginning

No package-supplying industry can boast a more spectacular record of achievement than this: In only 10 years the formed foil container has come up from nowhere to a billion units annually. Significantly, the industry has been so busy trying to keep pace with the demand from heat-and-eat foods it has scarcely had time to look for new applications. But now formed aluminum-foil containers are edging into the realm of straight packaging of foods and non-foods (example: Kraft's Party Snack cheese spreads in ribbed foil cups). It's obvious that the potential of this package form—today's lowest-cost metal container—has barely been tapped. For the full details of what's happening in this exciting, expanding industry,

Read this month's Supplier Industry Survey, "Foil Containers," p. 96

One-trip shipper of polystyrene foam

Here's an economical shipping container for perishables in which rigid, lightweight insulating polystyrene foam replaces corrugation between liner sheets of kraft paper. Now being used as a one-way, ice-packed shipper for roses, its future obviously lies in transporting other perishables. In addition to being economical enough to be discarded after one use, the sturdy new foam-cored shipping container stands up under rough handling and its insulating properties eliminate the need for special protective liners.

Turn to "Foam-Cored Shipper," p. 102

A shipping carton that seals itself

No glue, no tape and no staples are required to seal the flaps on Fresno Macaroni's shipping cartons, which come with flaps pre-printed with a cohesive adhesive that sticks to itself and nothing else. This company found self-sealing shippers the solution to a production bottleneck (they've sped up production 57%) and to an in-plant space problem (no auxiliary machinery or materials are needed, so one employee working in a smaller space can keep pace with an average production line). And the principle of under-flap adhesion offers this merchandising plus: The entire surface of the carton is preserved for product name or selling copy.

Read about it in "Self-Sealing Shipper," p. 112

Carton coder smooths multi-plant design snag

One problem of simplifying carton design for multi-plant packages is the legal requirement that the manufacturing location be included in label information. For its widespread Sealtest ice-cream plants, National Dairy Corp. satisfies this requirement and reduces its ice-cream carton line to just four designs by adopting a branch-labeling debosser that automatically stamps the local plant code on the carton's upper locking slot panel without defacing the design. An attachment to the regular cartoning machine, the cost-cutting debosser is synchronized by an impulse switch positioned at the release gate of the carton-blank feeder. For more details,

Turn to "Cost-Cutting Carton Coder," p. 116

Ethylene polymers promise better paper-coating properties

Important to individual converters as well as packaging in general are methods that will improve the physical properties of coated papers. Now, laboratory research reveals encouraging properties for polyethylene-modified wax-coated papers. Studies of hot-melt paper-coating techniques were carried out for cloud points, viscosities and tensile strengths of the base coating, in addition to physical properties of paper coated with polyethylene-wax blends. Cloud point and viscosity properties of the hot melts permit a quick estimate of a resin's suitability for the mechanics of a particular coating operation. Tensile strengths of cooled specimens indicate the value of a modifier in terms of increased strength imparted by the modifying resin. A technical report by G. S. Peacock, W. H. McKnight and J. M. Austin.

See "Polyethylene-Wax Coatings," p. 137

Vol. 31 No. 5 January 1958

Turn of year

What stands out from 1957 offers packaging's best guide to 1958; significant advances will go to work in the new drive for better marketing and selling

The year 1957 will be remembered as the year in which aluminum cans appeared, polyethylene film became significantly cheaper than cellophane, aerosols began to break into the food field, squeeze bottles with new plastic linings broke the permeability barrier, fluorocarbon film made its entrance into packaging and a significant trend toward wrapless, linerless, thermosealed folding cartons got under way.

Marketingwise, the past year will be known as one in which the salesman was ascendent. As one top food executive expressed it, "Our problem no longer is how to make what we can sell, but how to sell what we make." Marketers everywhere probed deeper than ever before into the factors that make a package *sell* and there was new emphasis on package changes that would help the men who *do* the selling—the wholesalers and retailers.

Just as these are the developments and trends that stand out in retrospect of the year past, they are the

In the photo above, *a half-dozen of the more significant new packages of 1957. From front to back: the first mass-market aluminum cans; wrapless, linerless, thermosealed carton; first non-aerated food aerosol; toothpaste in a lined squeeze bottle; extruding cream container; sterile suture in fluorocarbon film.*

Siftproof carton has a pre-attached liner of polyethylene-coated paper that seals with the flaps.

Shaker flour that can be placed right on the kitchen stove lends consumer convenience to a staple.

Slide-track thermoform on a paperboard card opens for easy shopper inspection of kitchen knife.

Tetrahedral carton has found a new application in single-service ice cream.

Bright ideas of 1957 that hold promise for

factors most likely to influence major packaging decisions in the year ahead.

In addition there are basic trends, both continuing and developing, of which every packager should be aware:

- More and better blister and skin packaging.
- Broad extension of the multipack principle.
- New packaging materials: polymer-coated films, polyester combinations, flocked polystyrene and polypropylene.
- More aerosols: for pharmaceuticals and personal products as well as foods. Also, new aerosol containers, propellents and valves.
- Advances in convenience packaging, based on dispensing fitments, metering devices, easy-opening packages.
- Potential of polyethylene as an overwrap, based on improvements in films, methods, machines, plus tear strips and other easy-opening devices.
- More king-size glass containers for foods and beverages.
- New shipping containers and new uses.
- New and improved packaging machinery, affecting packaging production for many major product lines.
- New emphasis on training and professional recognition for packagers. The first MODERN PACKAGING Research Fellowship Award, amounting to $2,000 annually, was given to a Michigan State University graduate-research student. The first National Starch Products Packaging Institute Packaging Engineering Scholarship, providing $400 a year, was presented to a freshman there.

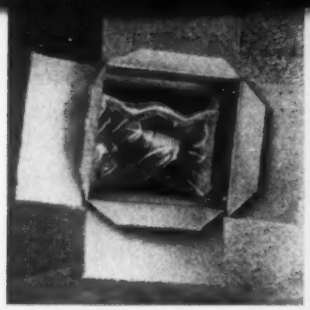
Packaging's statistics

Dollarwise, 1957 packaging totals probably set an all-time high—up 2 or 3%. The increase stemmed from higher container prices, which in turn reflected increased materials, overhead and labor costs. In volume, packaging was probably 1 or 2% under the record totals of 1956.

Complete 1957 totals will not be available for some time, but the following round-up should prove close for representative categories:

Corrugated and solid fibre shipping-container shipments are expected to approximate the record 97.6 million square feet shipped in 1956. Value for 1957 may exceed slightly the 1956 dollar total.

Metal can output for 1957 should be within 2% of



Hammock pack is a new way to ship fragile parts entirely suspended in polyethylene film in carton.

Trend to hang-ups is highlighted by Cutex hand cream's collar-on-a-tube, an inexpensive way to win display.

Skin-packaged socks suggest a new way to contain and display a wide variety of soft goods.

Thermoformed card using a laminated vinyl sheet makes effective counter display for 36 vials.

Electrodes in a folding carton cook hot dog with high-frequency current as it passes from vending machine.

the future

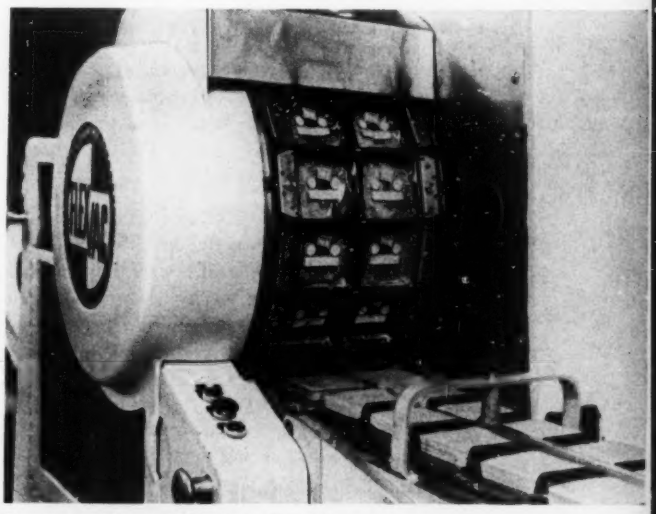
the record 1956 total. Reduced demand for fruit and vegetable containers (reflecting smaller crops) was the major cause of the over-all decrease. Volume for 1957 may exceed the 1955 total by about 4%.

Folding paper box shipments for 1957 are expected to be 1 or 2% above the 1956 quantity. In dollars, box deliveries probably ran 4 or 5% above the 1956 value.

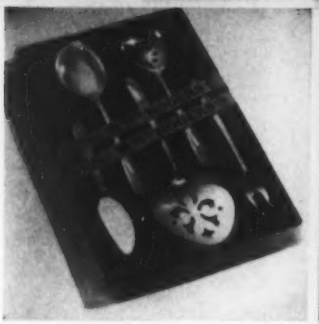
Glass containers shipped for 1957 are believed to have established a new industry record, surpassing the previous high of 1956 by approximately 2%. Dollar volume for 1957 was possibly 4 or 5% above 1956.

Closure shipments for 1957 just about equalled the 1956 volume. Demand for metal and plastic caps and crowns also approximated the 1956 total, offsetting reduced demand for milk-bottle closures. Increased material costs should have hiked the 1957 dollar value slightly above the 1956 volume.

Converted flexible-packaging products for 1957 probably passed the record 1956 volume by 3 to 5% in both quantity and dollar volume. Demand for cellophane bags may have dropped below the 1956 volume, although polyethylene bags and bags of polyethylene in combination with other flexible ma-

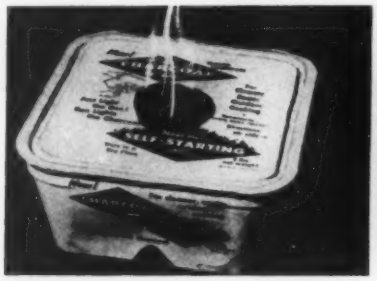


Progress in machinery. Flexible vacuum packaging reached a new high in automation during 1957 with this continuous machine that pockets slices between two webs of polymer-coated polyester, seals and draws a vacuum at 80 a minute.

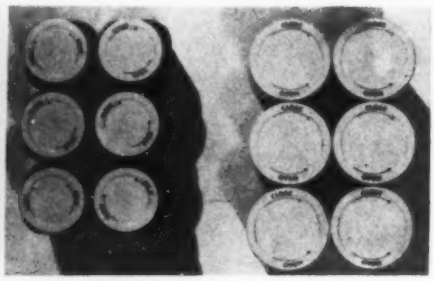


Flocked polystyrene sheet, thermoformed, makes a glamorous platform at low cost.

Gourmet foods are given luxury design treatment in General Foods' new line of 55 exotic items.



Dustless charcoal that comes in a flammable molded-pulp package is a boon to the home barbecuer.



Square-bodied jars for Stokely (left) save 15% of shelf space over round jars (right). Both are 12-oz. size.

terials probably moved ahead by at least 10%.

Plastic containers—molded, extruded and formed—definitely moved ahead both in volume and dollars during 1957. Polyethylene bottles and tubes scored impressive gains. So did blister, skin and contour packs using thermoformed sheet.

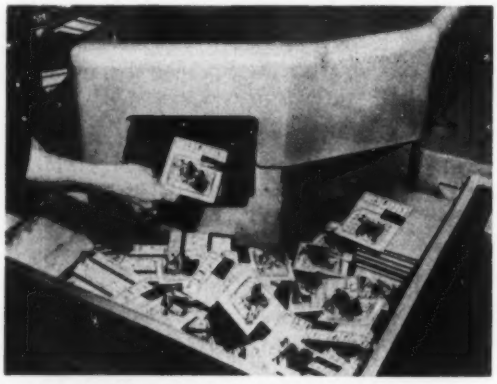
To summarize, it appears that container supplies were plentiful, demand was tighter, prices and costs were generally higher and profits were tighter. Order backlogs were generally steady with 1956. Raw-material inventories were at a minimum level and finished-goods inventories ranged from no change to higher than 1956.

Outlook for 1958 packaging activity, in general, appears conservatively optimistic, with manufacturers' opinions almost evenly divided between increases and decreases from the 1957 level.

More know-how for marketers

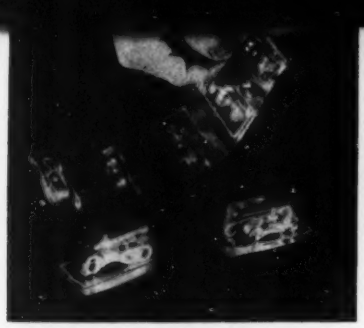
The search for ways of making packages do a more efficient selling job produced new knowledge on how to:

- Slant packages to more than one type of self-service outlet (Aug., p. 87).*
- Make corrugated shippers take on added duties in advertising and display (March, p. 147).
- Employ quality control to gain better planning and more effective supplier relations (March, p. 173).
- Solve space problems in retail outlets by going



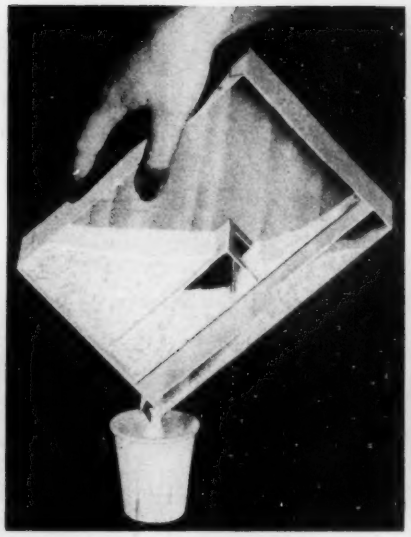
Mechanization of blister packs made rapid progress last year. This rotary machine has resulted in doubling the production of Masonite hardware items blister sealed on cards.

* References in parentheses are to articles in 1957 issues of MODERN PACKAGING. They provide sources for additional details.



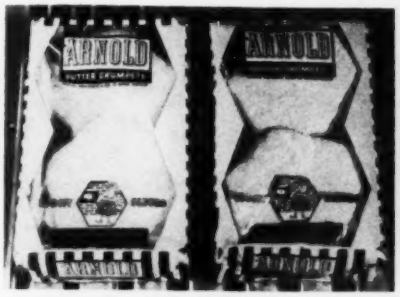
Strip thermoform makes an all-plastic package for Holley automotive contact-point sets; each unit tears off.

Grease in saran tubing—similar in appearance to a sausage—makes automotive grease guns easy to load.



Self-metering carton for Way detergent; cutaway view shows how each tilt of carton measures half a cup.

Double-lid can permits supplying seasoning in a packet to be used to taste.



Non-fogging cellophane (right) offers new eye appeal for frozen baked goods.

vertical—with hang-up packages (Sept., p. 107).

▶ Do a more effective job of packaging for supermarket handling needs (Oct., p. 120).

Multipacks moved into a variety of food and non-food applications (Feb., p. 73). Packagers of orange juice, pet food and evaporated milk already are switching from seasonal to standard multipack applications. This year, look for baby-food multipacks to grow. Hardware, textile and produce multipacks will move to the fore—billboarding, upgrading and sharpening the strategy for these products.

The introduction of General Foods' Gourmet line (Sept., p. 116) was an outstanding packaging-merchandising maneuver. This "Cadillac" approach could have a far-reaching influence on quality, luxury-grade packages—with many major companies adding a prestige line to lead the way for their regular packs.

New materials

Packaging materials are of top interest because they open up broad packaging opportunities.

A new type of polymer-coated cellophane (March, p. 170) overcomes the problem of fogging in film-wrapped packages of frozen foods and other high-moisture-content products.

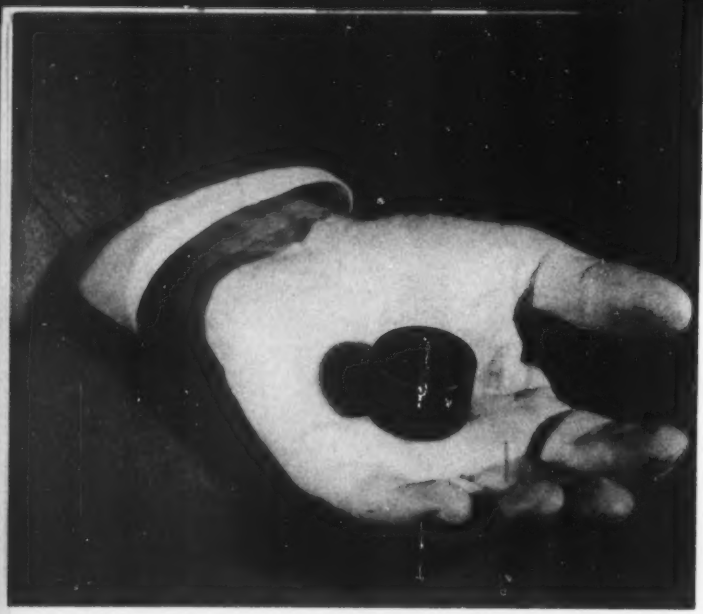
Important new film combinations using polyester, saran and/or polyethylene are rapidly extending the packager's opportunities, especially in vacuum packaging (March, p. 198, and Oct., p. 154).

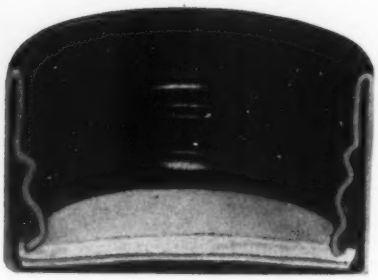
Laminations of polyester film appear promising for applications in skin and blister packaging. Preliminary work with new polyester-polyethylene films indicates that the unique strength properties of polyester will permit the use of thinner gauges for faster production and lower material costs. In some instances the polyethylene enables sealing of the film to uncoated board (Dec., p. 139).

A second producer of polyester film has entered the market. The result is a heat-sealing type. Initial use of this film in packaging is in a cartridge-type dispenser for caulking compounds (Nov., p. 138). A third producer will be marketing polyester film early this year. Reportedly, this film will be a heat-sealing type and will offer different properties and characteristics.

The first package to employ fluorocarbon film is a sterilizable suture tube (Nov., p. 158). This film's protective and performance properties are about the best available in a packaging film. True, fluorocarbon film is costly and is called for only where certain protective absolutes are needed. Nevertheless it will be studied for [*Continued on page 182*]

A NEW





Fluted sides of 7-Crown's new aluminum closure (above) conceal threads formed in the turned-in interior wall (right). Locked-in liner cannot fall out to cause a leaker. Double wall gives strength, avoids breakage. Result, important production-line savings.

The first concealed-thread, completely prefabricated aluminum bottle closure is now capping Seagram's 7-Crown Whiskey—reportedly the largest selling whiskey in the country.

In external appearance, the lacquered, fluted closure looks surprisingly like a molded plastic cap. It has virtually eliminated leakers and breakage, resulting in an estimated saving of several thousand dollars a year on 7-Crown.

The development is expected to be of widespread interest not only in the liquor field, but wherever molded plastic closures are being used in high-speed bottling operations. The new closure can be anodized, lacquered or enameled in any color, including pastels.

A double-wall construction gives exceptional rigidity for weight and permits concealment of the threads in the inner wall—quite different from the familiar single-ply aluminum caps which are "rolled on" to the bottle threads during application. The new closure is applied with conventional capping machinery.

The double wall is achieved during manufacture simply by doubling the metal inward. This has the advantage of pinning the closure liner in place and assures that no leaking bottles will be shipped because of a lost liner.

The new closure grew out of 7-Crown package upgrading. In a search for design improvements to suggest dignity and greater value, Seagram's has adopted a more graceful bottle—one with a longer, easier-to-grip neck (appreciated by bartenders) plus more taper in bottle silhouette.

Another feature design is location of the Federal indicia on the back of the bottle, now permitted by the Alcohol & Tobacco Tax Unit of the Dept. of the Treasury.

The new aluminum closure as used by Seagram's is lithographed, before forming, with a maroon lacquer—a color design-related to other packages in the large Seagram family. The fluted sides impart a smooth, smart design look and make opening and reclosing easy.

In meeting Seagram's specifications, the closure manufacturer had to develop (1) a lacquer coating to withstand forming pressures and (2) new and specialized tools for forming and threading operations.

The accomplishment of turning and threading the interior wall and fluting the exterior wall—all without distortion—is considered remarkable even with today's advanced methods.

A variety of finishing methods can be used. The closures can be lithographed on the top or be embossed and shaved in attractive patterns. (Shaving is a means of producing a natural aluminum surface on raised letters or similarly embossed surfaces.)

The new closure was introduced on the Seagram lines—which turn out about 120 million bottles of 7-Crown annually—with no disruption of produc-

ALUMINUM CLOSURE

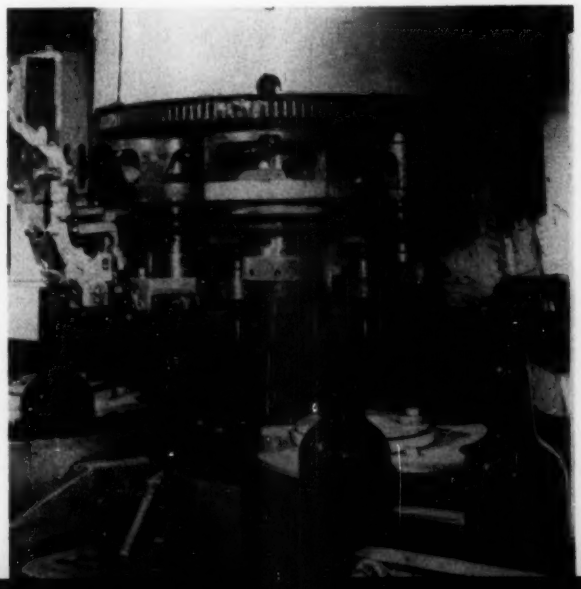
Its turned-under double wall conceals pre-formed threads and gives it the appearance of molded plastic; liners are locked in and production-line breakage eliminated

tion. Only minor modification of equipment was necessary.

Meanwhile, economies have been achieved in closing and sealing the bottles. The Federal tax stamp, applied to both the neck and the closure is a tamperproof feature; no cellulose seal is needed, although it may be used if desired for decorative effect. The neck band is spot varnished, but an uncoated area is preserved so the tax stamp will adhere.

Supplies and services: *Closures developed and supplied by Aluminum Co. of America, 1501 Alcoa Bldg., Pittsburgh 19, Pa. Bottles by Anchor Hocking Glass Corp., 20 Glass Ave., Lancaster, Ohio; Ball Bros. Co., Inc., 1509 S. Macedonia Ave., Muncie, Ind.; Fairmont Glass Works, Inc., 1301 S. Keystone Ave., Indianapolis 7, Ind.; Knox Glass, Inc., Knox, Pa.; Owens-Illinois Glass Co., Toledo 1, Ohio, and Thatcher Glass Mfg. Co., Inc., Elmira, N.Y. Labels lithographed by American Label Co., 216 W. 18 St., New York; Consolidated Lithographing Corp., Carle Place, Long Island, N.Y.; The Progress Lithographing Co., Section Rd. & Penna. R.R., Cincinnati 37, Ohio; Schlegel Lithographing Corp., 374-380 Second Ave., New York 10, and The U.S. Printing & Lithograph Co., 340 Beech St., Cincinnati 12, Ohio.*

Similar to plastic in appearance, the new lacquer-coated, maroon-colored aluminum cap is the first of its kind to offer smooth finish, fluted edge for easy turning and concealed thread. Both deep- and shallow-skirt styles are used.



Standard capping machine applies the new closure. Only minor modifications were required; and actually efficiency is improved on Seagram's high-speed lines, which fill, label and close 120 million bottles of 7-Crown annually.

No want of a nail

Ticklish problem of packeting exact counts of fasteners appears solved with Atlas Tack's automatic machine that prints, forms, fills and seals at high speed

Pouches formed, filled and sealed from a continuous web of heat-seal-coated kraft paper provide a practical answer to Atlas Tack's need for an inexpensive package of "custom-packed" nails and tacks—included in do-it-yourself kits. Outmoded are the pre-formed envelopes and folding cartons shown in the inset photo at upper left.

Tacks and nails are notoriously perverse products to handle in packaging operations—and even harder to pack economically in pre-counted quantities. Yet a profitable answer to this problem—and indeed to the problem of packaging in multiples almost any small item—has been found in the use of special vibratory counters and high-speed pouch-packaging machines at an old-line New England firm, Atlas Tack Corp. of Fairhaven, Mass.

The specific problem for Atlas: How to cut costs and speed the packaging of carefully counted fasteners that are "custom packed" for other manufacturers to be included in such do-it-yourself kits as counter moldings and screen assemblies. These home installation kits must contain exactly the right number of tacks or nails necessary to complete the job. But costs must be kept pared, too, to keep the over-all kit price attractively low.

The Atlas answer was to throw out conventional hand packaging in pre-formed envelopes and folding boxes—used by the company since its start in 1810—and substitute two fast, flexible, new pouch

packers equipped with ingenious counting attachments that turn out accurate, code-printed packages ranging from 2 to 5 in. in length at rates up to 4,500 per hour each. The old hand-filling technique, despite its accuracy, produced only 300 to 350 units per hour in envelopes and 1,200 per hour in folding cartons.

It is in cost reduction, however, that the new pouch packager really hits the mark. Using 25-lb., heat-sealed, roll-stock kraft paper, this automatic machine reduces expense of packing small nails and tacks by 66 to 72%.

At present Atlas is using the machine-formed pouch only for its custom-pack operations and has put up between 100 and 150 varied nail and tack items that range up to 2 in. in length. But so attractive is the cost picture with this equipment, the company is seriously considering using a film pouch for its own retail line, now in folding cartons.

To show the speed, accuracy and simplicity with which the pouch packer performs, here is a quick rundown on the mechanical operation of the unit:

Atlas is using two machines—one with two vibrating heads, the other with four. The smaller machine will handle up to 50 tacks or nails per package at a speed of up to 90 pouches per minute. The larger machine will count 80-item groups at a rate of up to 80 packages per minute. Mechanical action in both units is the same.

The nails or tacks to be packaged are fed into the bowls of the magnetic, vibrating feeder-counters either by hand or mechanically from a larger supply bin. Vibrating action moves the product up a spiral track around the periphery of the bowl and sorts and aligns the tacks. Near the top, bodies of the tacks or nails fall into a slot in the track, with the heads in an upright position. An air blast at the exit of the bowl blows excess or unaligned fasteners back into the supply bowl. Items in the slots then slide down the track to the packaging section.

An electric switch at the top of the slotted supply track stops vibratory action of the feeder when the track is full and starts it when supply decreases.

At the lower end of the track, a sliding contact is adjusted for the number of nails in the packet. It is connected to an electric switch that actuates the pouch forming, filling and sealing mechanism. It works on a simple area principle. That is, the device is set by eye for the number of tacks or nails that will fit in the track between the contact and the package supply hopper. When the switch triggers packaging action, one charge of product is dropped into this hopper.

The slotted track itself is adjustable and can be reduced in width for the finest finishing nails, or opened up to handle a 5/16-in. bolt. A spring-loaded cover permits instant removal of bent nails or jammed-up items.

In the packaging section, a 3-in. web of kraft paper is fed from a roll at the rear of the machine through a reciprocating coding device that imprints company names, trademarks and pertinent information on the size and number of nails or tacks in the package. This printer will accommodate either movable type or a rubber plate.

From the coder, the paper travels through two rubber draw rolls to a reciprocating knife that cuts off a strip of paper twice [*Continued on page 204*]

Supplies and services: *"Formapak" machines and "Vibracount" counters and feeders by Brown Filling Machine Co., Fitchburg, Mass. Heat-seal-coated kraft paper by Nashua Corp., Nashua, N. H.*

PHOTO COURTESY ATLAS TACK CORP.

Automatic pouch packers now used have combined output of 170 units per minute. Large machine (left) has four vibratory feeding and counting heads supplied from overhead hopper by vibrating trough. Packages are formed, filled and sealed just below triangular "tunnel" hopper on front of machine. Smaller machine at the right has two feeding and counting heads.

12 SURVEY OF A SUPPLYING INDUSTRY

PHOTO COURTESY GENERAL FOODS

60,000,000 frozen dinners were produced by frozen-food packers last year—and most of them were packed in foil containers.

From nowhere, this new kind of package has come up in 10 years to a billion units a year—and its future lies well beyond today's typical heat-and-eat food applications

FOIL

A brilliant 10-year-old in the galaxy of new postwar package forms is the formed foil container.

As if by destiny—with the abundance of aluminum after World War II—it arrived just in time to meet the need for low-cost, inert, cook-in containers for the booming heat-and-eat food business.

The disposable foil pan package can go right from packer to store to oven to dinner table without transfer—an advantage virtually unrivalled by any other type of low-cost rigid container. Its ability to conduct heat rapidly likewise is a decided advantage for the control of temperatures in quick freezing. Its sparkling surface and the colorful printing effects that can be obtained open up bright new merchandising opportunities, not only for heat-and-eat, but for many other food and non-food products.

The formed foil container (actually, semi-rigid) bridges the gap between flexible foil wraps and the rigid can, at a cost that is probably the lowest of any formed metal package. In most cases its cost is comparable with that of the average liquid-tight paper cup or tray—perhaps less, users say, when figured on the basis of over-all production and distribution economics.

These are among the reasons why the production of formed foil containers pushed well over the billion mark in 1957 and why industry sources expect annual volume to triple by 1960 and to quadruple to nearly 4½ billion by 1965. Seldom has the packaging field seen such rapid growth to the billionaire class.

In terms of pounds of aluminum consumed, the foil-container industry has shot up from 19 million pounds in 1954 to 22 million in 1955, 25 million in 1956 and a record high of 28 million pounds last year. Thus, according to the Aluminum Foil Container Mfrs. Assn., Inc. (a newly formed group representing this industry), the foil container accounted for nearly a fifth of the total of 150 million pounds of aluminum in all forms used in packaging in 1957. Unit volume is estimated by figuring an average of 1,000 containers per 25 lbs. of aluminum.

Total 1957 dollar volume is reported at $21 million for this container industry, which started in 1947 with a few crudely formed disposable pans for baked goods and frozen pies.

Foil containers have found their biggest application for bakery goods and frozen foods, which between them account for about 95% of total current use. The spectacular newcomer of the past two years is the colorful, ribbed foil cup as used by Kraft[1] for processed-cheese cocktail spreads—pos-

[1]See "Enter: The Foil Cup," MODERN PACKAGING, Aug., 1956, p. 122.

sibly the largest single use of formed foil today. Outside the food field, one of the most promising new volume uses is for flowers and plants.

THE PACKAGE

Formed aluminum containers are made of foil varying in thickness from 2 mils for small tart pans up to 7 mils for large compartmented frozen-dinner trays, with the average 3 to 4 mils. For comparison, flexible foil as used in wraps and laminations usually runs from 0.8 to 3.0 mils and aluminum cans usually gauge from 7 to 10 mils, with the majority close to 10. Rigidity is not strictly a product of thickness; tempering and annealing of the metal help to give semi-rigidity to formed foil containers even in the lightest gauges.

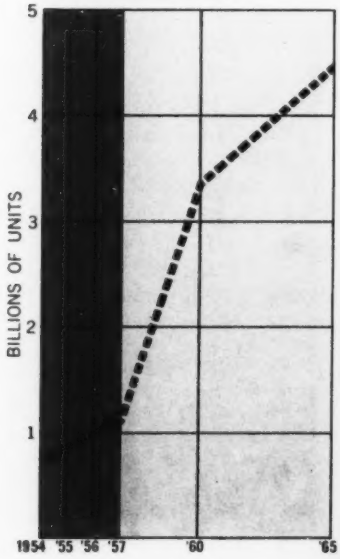
Sizes of the formed containers range from 2-oz.

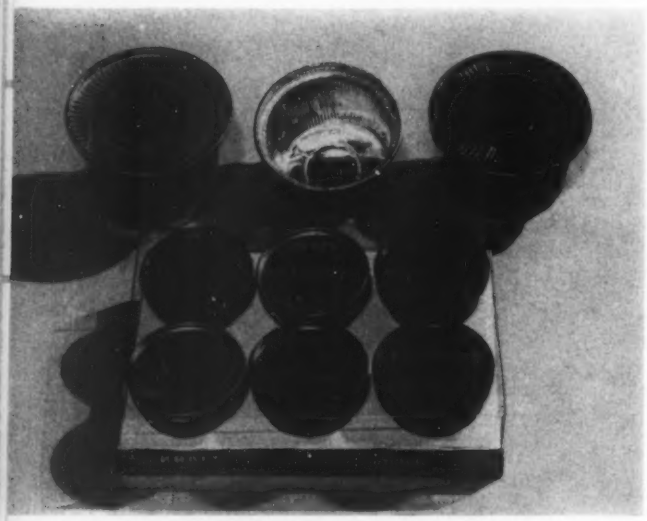
CONTAINERS

PHOTO COURTESY REYNOLDS METALS CO.

Like glittering coins, rigid-aluminum pie pans and other containers stacked in warehouse are symbolic of industry's spiraling growth.

THE INDUSTRY'S FORECAST FOR FORMED FOIL





Largest single user of formed foil today is probably Kraft Foods for its Party Snack cheeses in colorful ribbed-foil cups. Ice cream, too, can be packed in these brilliant packages.

cups to those as large as roasting pans. In one production method, containers are formed by drawing or stamping a sheet of foil between opposing dies. These containers may be round, rectangular or triangular, in 20 or 30 different styles and in a variety of sizes. By another process, containers are formed by folding the foil around a mandrel on machines similar to those used in box making. These containers are rectangular in shape and are supplied in numerous stock sizes.

Formed foil containers may be closed by crimping on solid foil covers of various constructions or by applying foil-laminated paperboard covers. Sometimes the paperboard covers are made with special protective coatings or with transparent windows, depending on product requirements.

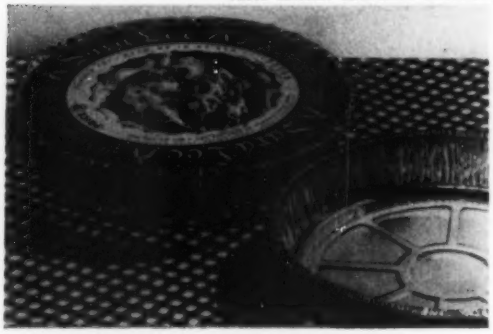
The baking industry was among the first to adopt formed aluminum containers. During the late '40s, bakers discovered that disposable foil pan packages could be used to replace traditional tin baking pans, thereby doing away with the labor of washing pans and transferring finished items such as pies and cakes to paper plates. With low-cost, thin-gauge, disposable aluminum containers, pies and cakes could be baked and sold in the same container. These throw-away packages had a further appeal: the consumer could heat contents right in the package, with no pan to wash. Kitchens of Sara Lee, Inc., pioneered a round aluminum pan with laminated window-style cover for cheese cake and other baked specialties in 1951 and had built up a business grossing more than $5 million by 1954,[2] principally as the result of aluminum foil containers.

The first foil containers for frozen foods were produced in 1947. Protected in an outer carton, the disposable foil pan soon became an efficient solution for the packaging of frozen pies which the housewife could pop right in the oven. The estimated total of frozen pies sold in these containers jumped from four million in 1951 to 25 million in 1953.

In December, 1953, Swanson came along with its revolutionary frozen TV dinners packaged in stamped, compartmented aluminum-foil trays.[3] By 1955 Swanson, reportedly, was selling one million TV turkey dinners and 600,000 frozen fried-chicken dinners every month.

In 1957, frozen-food packers altogether produced 60 million frozen dinners, 400 million frozen pot

PHOTO COURTESY EKCO-ALCOA CONTAINERS



Multi-million-dollar business has been built by Kitchens of Sara Lee, Inc., for baked foods in sparkling aluminum pan packages that go right from producer to home oven for warming in the same container. Paperboard covers with transparent windows give visibility to delicious contents.

pies, 75 million frozen fruit and cream pies—most of them in foil containers.

A glimpse into the frozen-food case of any supermarket gives an idea where the foil pan package is going today. There is everything there from frozen lobster Newburg to Mexican enchiladas ready to heat and eat because of the convenient aluminum-foil packages, with more dinner entrees and pre-cooked specialties arriving all the time.

THE INDUSTRY

At least a dozen companies produce a complete line of formed aluminum-foil containers, while a

[2]See "Baked Goods," *An Industry Survey*, MODERN PACKAGING, March, 1954, p. 134.

[3]See "The Frozen Dinner is Back," MODERN PACKAGING, March, 1954, p. 134.

number of smaller firms supply specialties and local requirements of the baking and frozen-food industries.

It is significant, perhaps, that each of the big producers of aluminum foil operates a foil container division or owns a subsidiary to make this type of container. All have invested heavily in research to improve container performance and mechanical handling, and to study the properties of aluminum that are continually opening up new applications in packaging.

Growing importance of the field is indicated also by the formation within the last two years of the Aluminum Foil Container Mfrs. Assn. to represent the interests of this type of aluminum container as a packaging form distinct from other types of aluminum packaging.

Because of their light weight, nesting qualities and unbreakability, distant shipment of foil containers poses no problem and producing plants generally do a nationwide business.

DEVELOPMENTS

A drawback to more rapid growth of foil containers has been the comparatively slow development of automatic machinery for closing them. Today, many advances are being made and producers of foil containers continue to work closely with machinery manufacturers to effect even more efficient equipment and to achieve greater standardization.

High-speed machines are available to place scored, foil-laminated paperboard covers over the folded, foil-tray-type package, such as is used for Stouffer's frozen dishes, ready for waxed-paper overwrap.

Both semi-automatic and fully automatic machines are available to crimp on aluminum covers. Some of these machines apply the covers as each container is centered under a die. Equipment of this type with automatic closure feed has rated speeds up to 2,700 containers per hour and is flexible enough to handle a number of different types of closures. Heat-sealing features offer liquid-tight seals.

Other types of machines apply stiff lids by means of rotary "plows," thereby eliminating the use of dies for closing. Another new type of foil crimper feeds sheet stock from a roll, trims it to exact length, curls and crimps the foil cover tightly under the pan rim by a series of nylon rollers. This equipment is designed particularly for packages in which food contents may protrude above the pan, such as frozen dinners. Companion equipment provides an automatic tray depositor that takes nests of empty trays and places them [*Continued on page 203*]

New tear strips appeal to consumer. Damiano Ravioli Co. attributes successful sales to this feature on its quick-frozen Italian foods.

PHOTO COURTESY REYNOLDS METALS CO.

PHOTO COURTESY KAISER ALUMINUM

High-speed closing is greatest boon to volume use of foil containers. This automatic foil crimper takes sheet stock from a roll, trims it to exact length, curls and crimps foil cover tightly under pan rim by a series of nylon rollers.

Better box for wheels

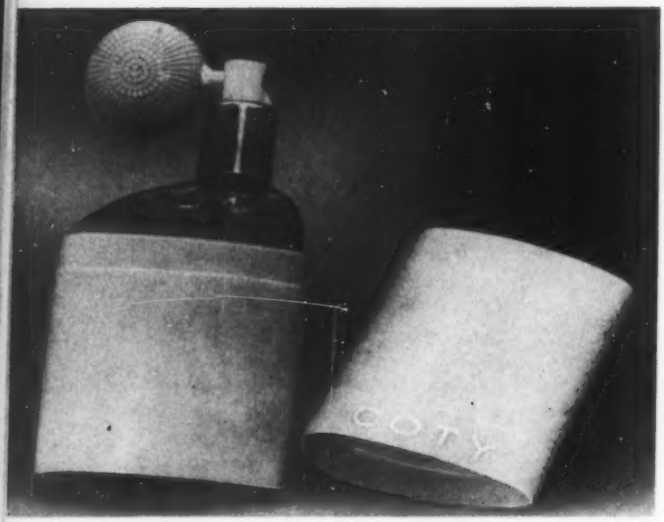
A corrugated folding carton that combines product protection with inventory ease is being used by Disogrin Industries, Inc., Jamaica, N.Y., to package its Disowheel line of small industrial-truck wheels. The wheels come two to a carton (top photo). Not visible in the photo are protective sheets of VPI paper which are wrapped around the steel hubs of the wheels—to prevent rust during storage—before they are placed in the shipping cartons.

Designed for more effective storage in small space, the sturdy cartons can be stacked easily. A lock-tab closure prevents accidental opening. Stacked ends out, the cartons also permit quick check of inventory. The printed end panels (bottom photo) contain blank spaces for marking full product information, so that users can tell at a glance which units need re-stocking.

Supplies and services: *Corrugated carton by Hinde & Dauch, 407 Decatur St., Sandusky, Ohio. Corrosion-inhibiting paper by Daubert Chemical Co., Nox-Rust Div., 333 N. Michigan Ave., Chicago 1.*

DESIGN HISTORIES

Linear polyethylene scores as case for Coty

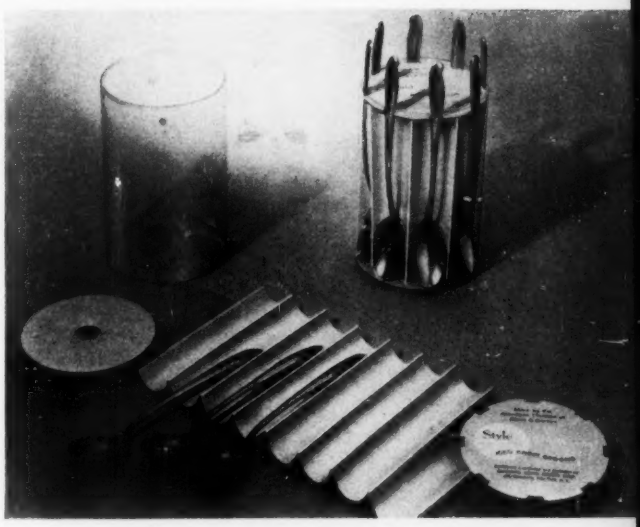


One of the first uses of linear polyethylene as a packaging material is a molded telescoping case for Coty's "Travel Lock Atomizer," containing bottled eau de toilette. The new plastic material was selected for its resistance to breakage and alcohol and for its high gloss that enhances appearance when flecked with molded-in metallic chips. Its rigidity protects the enclosed bottle and the rubber bulb of the atomizer assembly when the case is closed for travel. Note that the bottle has an off-center neck, which permits inclusion of the permanent atomizer assembly without any increase in size of the case. The atomizer has an "open-and-close" dial-like device to prevent accidental discharge. Company name is hot-stamped on the cover.

Supplies and services: *Design by Eric deKolb, 20 E. 53 St., New York. Glass bottle by Wheaton Glass Co., Millville, N.J. Telescoping case by Wheaton Plastics Co., Mays Landing, N.J., using Phillips Chemical Co.'s Marlex 50 linear polyethylene. Atomizer assembly by Evans-Crowder Co., 390 S. Lafayette St., So. Lyon, Mich.*

All-angle visibility in a sturdy package

New way to increase multiple-unit sales of tableware is suggested by this transparent, cylindrical gift package adopted by Scientific Silver Service Corp., New York, for its iced-tea spoons and oyster forks. Package design is such that the number of items it contains is immediately apparent and the silverware can be seen from any angle. The package consists of a clear acetate cylinder into which is inserted a vacuum-formed, fluted polystyrene column that provides compartments for each piece of silver. This column is tinted yellow for the spoon pack, aquamarine for the fork pack. Top closure (right) is a printed paperboard disk with spaced notches that friction-hold the handles of the silverware. Bottom closure (left) is a die-cut paperboard disk that snaps into the cylinder.

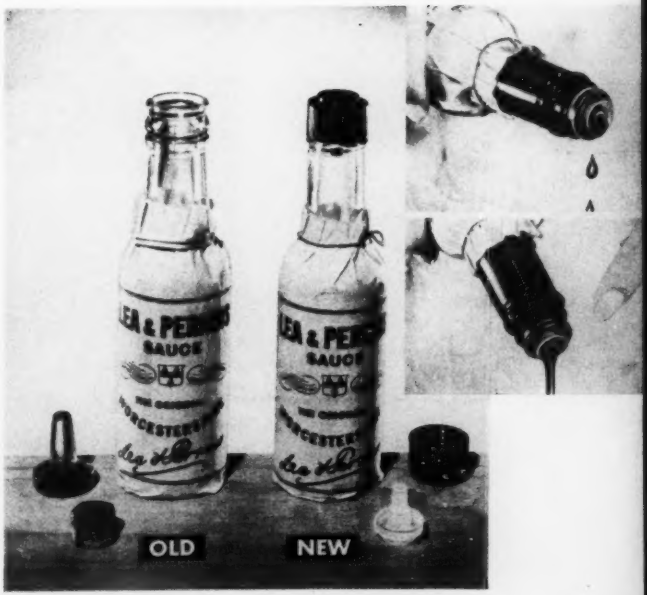


Supplies and services: *Design by Eckstein-Stone, Inc., 24 W. 54 St., New York. Celanese acetate cylinder and paperboard disks by J. E. Plastics Mfg. Corp., 400 Nepperham Ave., Yonkers, N.Y. Polystyrene column by Plastic Enterprises, 124-14 22 Ave, College Point, N.Y.*

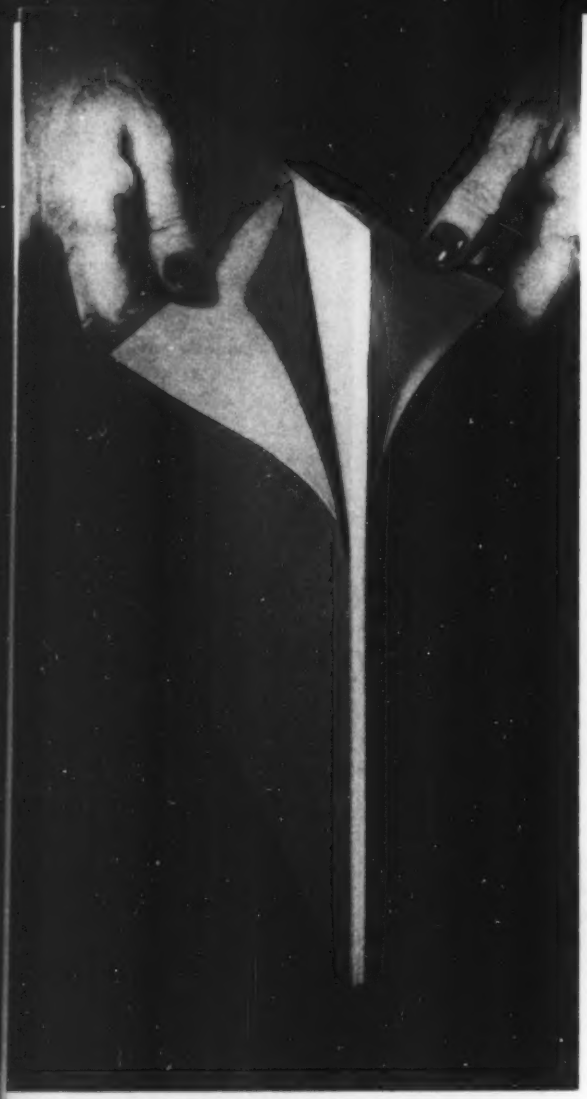
DESIGN HISTORIES

Drip-or-pour closure

Lea & Perrins, New York, has made the first major packaging change in the 125-year history of its Worcestershire Sauce in glass bottles. A patented polyethylene pour plug and phenolic plastic screw-type closure have been adopted by the company to replace the circular-cork-and-glass-stopper combination familiar to generations of customers. The pouring unit, which has an integral tube with a small opening, clips over the top of the bottle's neck to form a secure fit. As shown in the inset photographs, users can control the flow of product—from drop-by-drop to a steady stream—merely by changing the elevation of the bottle. The pouring unit also has a no-drip feature which prevents residual amounts of the sauce from dripping down the side of the bottle and soiling users' hands or table cloths, the company points out. Unchanged are bottle shape and the familiar wrap-around paper label.



Supplies and services: *Pouring spout and closure by Owens-Illinois Glass Co., Plastics Div., P.O. Box 1035-36, Toledo, Ohio.*



Protective covering for foam is a layer of kraft paper laminated to each surface of ¼-in. polystyrene. Resulting foam board is used to make insulated shipping cartons for ice-packed roses. Foam is impervious to melting ice.

Foam-cored shipper

Rigid, insulating polystyrene foam replaces corrugated medium in boxes now used for refrigerated shipment of roses and is considered for other perishables

Shippers of perishables now have an easy and economical way to pamper their precious products in transit. They can pack them in a shipping container in which rigid, lightweight, insulating polystyrene foam replaces the usual corrugated medium between liner sheets of kraft paper. This is a development which has been under study for some time.

As an ice-packed shipping container for roses, the new foam-cored, one-way carton is used by J. L. Dillon, Inc., Bloomsburg, Pa., wholesale florist. The core is a ¼-in. wall of polystyrene foam.

This stapled telescoping box was created to meet a demand for a container that is easy to handle and durable, yet economical enough to keep shipping costs reasonable. The insulated board can also be made into a regular slotted carton. Its broad future should lie in shipping other perishables.

All flowers present special shipping problems. But roses, which must be packed in crushed ice to preserve their crispness and fragile beauty, are a special challenge.

Shipping containers in current use in the florist trade include one-way corrugated containers and returnable freight-heavy wooden boxes. The returnable boxes require extra handling and storage space at both shipping and receiving points.

The lighter-weight corrugated containers are inexpensive enough to be discarded after one trip.

Lightweight shipper for roses is this telescoping box made of new insulated board. The lid prop shown is one of two braces used horizontally to increase rigidity, keep flowers in place.

The new polystyrene foam and kraft paper container, unlike previous shippers, does not require packing with macerated newspapers and special liners that become wet and tend to decompose as the ice melts.

The ¼-in. foam provides considerable rigidity and good stacking characteristics. The shippers are sent flat to the florist, who sets up his own boxes with a stapling machine. In weight, the foam boxes rival corrugated.

Florists who have received shipments in the new cartons say they arrive uncrushed, without the usual damage from the binding rope and with the customary steel-tipped wooden braces still in place inside. Refrigeration is so improved, they report, that 24-hr. delays are not critical and up to 50% less icing may be feasible. For Dillon, the carton holds the usual 500 roses per box and is said to stand up well for 500-mile shipments.

Costs of the new container are slightly higher than those of the previous one-way corrugated shipper, but are offset by improved product protection and by lower labor and material costs, including savings in liners and their storage.

Supplies and services: *"Fome-Cor" shipping container by St. Regis Paper Co., 150 E. 42 St., New York 17.*

No-ice film pack holds flowers in own humidity

Another flower-shipping innovation uses a polyethylene film wrap in a simplified, all-corrugated pack to keep carnations garden fresh in transit without having to use ice.

By sealing in the moisture given off by the flowers, the film creates a humid atmosphere that maintains freshness for at least three days. And polyethylene's soft texture does not bruise delicate blooms.

The carrier for the film-enveloped flowers is a telescoping corrugated carton designed to give double-wall protection, provide adequate strength and insulation. It is set up by stapling. Shipping weight has been cut 50% and shipping costs 40%, according to the Colorado State University Experiment Station, where the film pack was designed in cooperation with the Colorado Flower Growers Assn. This packaging has been found satisfactory for most varieties of fresh flowers.

The film is 1.25-mil polyethylene, but the station reports thicknesses from 0.75 to 1.50 mils can be used satisfactorily.

Full inserts of corrugated board line the top and bottom of the new container. They are 5 in. longer than box length and scored to form a V-shaped peak at top and bottom center of the box. When the container is closed there is about a 2-in. space between the peaks—just enough to hold the stems in place while protecting the blooms. The shipper's lid has a white outer liner to deflect heat from the film-enveloped flowers if the box is left standing in the sun or near excessive heat.

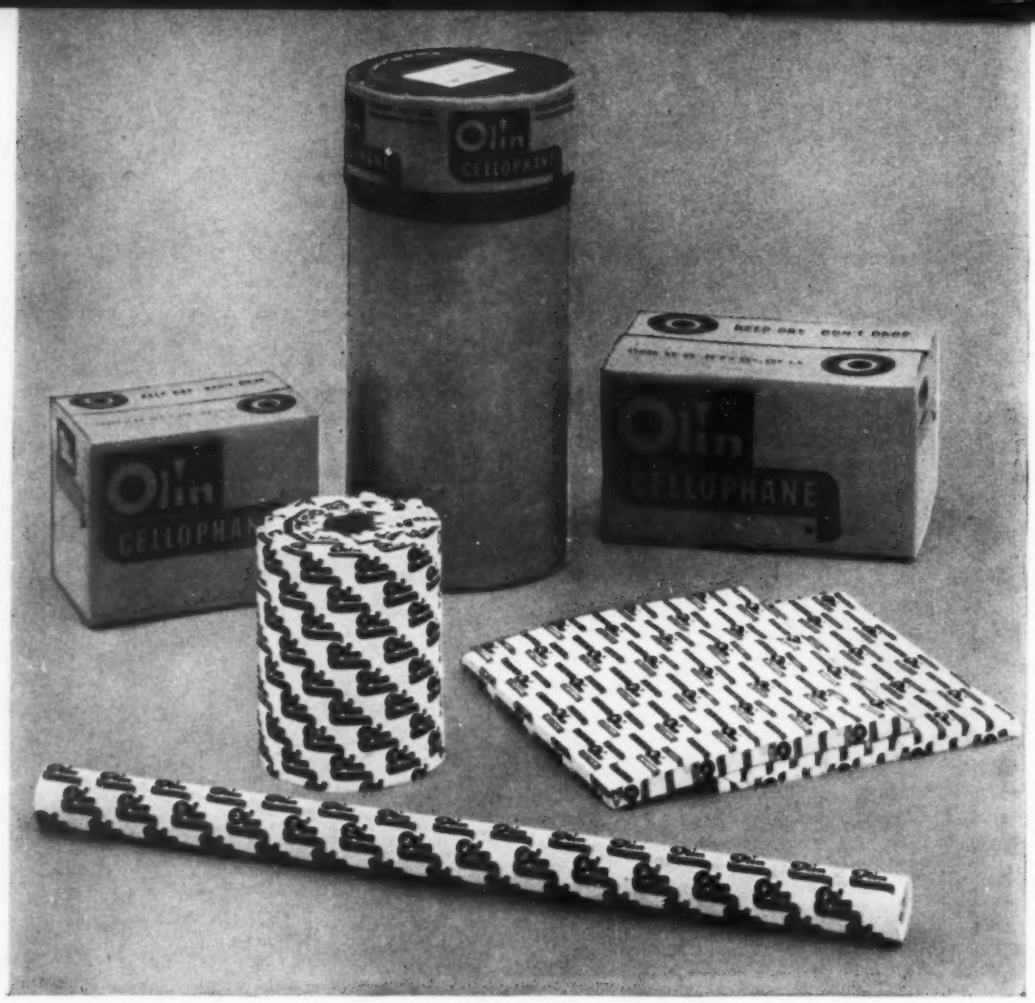
The new shipper has been adopted by several Denver wholesalers who have previously used 5 to 10 lbs. of ice, newspaper padding, nailed wooden braces and waxed boxes, with a total shipping weight of 25 lbs. or more. Now these wholesale florists are using only the corrugated board, together with a 6-ft. square sheet of polyethylene film.

The nearly airtight film pack (it is not heat sealed) retains much of the carbon dioxide given off by the blooms and it is possible that the carbon dioxide build-up slows plant breathing and thus helps to arrest deterioration.

Supplies and services: *Corrugated containers by Lawrence Paper Co., Foot of New Hampshire St., Lawrence, Kan., and Gaylord Container Corp., Div. Crown Zellerbach Corp., 111 N. Fourth St., St. Louis 2, Mo.*

Iceless pack cradles carnations in polyethylene film which retains natural moisture and carbon dioxide. V-shaped corrugated inserts in base and cover of container support stems and protect delicate blooms. White outer liner protects flowers from sun and heat. Shipping weight has been cut in half by this new packaging method.

COLOR PLATES COURTESY COLORADO STATE UNIVERSITY



Colorful symbol says Olin wherever it goes, reproduced big or little, on cartons or tubes, and all-over printed on wraps. Note use of red and green on wraps to distinguish cellophane used for meat wrapping from that used for produce packaging.

Olin makes its own decision

Can packaging really change the course of a business?
The company that coined the slogan intends
to find out, with forceful new identity for its own products

In 1954 the Film Div. of Olin Mathieson Chemical Corp., one of the nation's three big cellophane producers, adopted as its advertising theme: "A packaging decision can change the course of a business."

The suggestion was aimed, of course, at Olin's customers. It stressed the importance of good package design. But one gray day in December, 1956, Milton Herzog, divisional vice president and general manager of Olin's Film Div., saw something that brought him up short. Making a routine tour of the company's Pisgah Forest, N. C., plant, from which cellophane in sheets and rolls is shipped to Olin's customers all over the country, Mr. Herzog suddenly was struck with the inadequacy of the company's *own* packaging design. Olin was overdue for a major packaging decision of its own.

Consulting with top aides, Mr. Herzog discovered that they were in agreement. Olin shipping packaging was not playing up to the forceful role it should assume in the company's over-all merchandising program. New criteria needed to be established for packaging that would:

- Offer improved convenience and better service.
- Reflect the personality of the company as a creative and aggressive young organization.
- Be sufficiently close to the old in design treatment to maintain the continuity of identity.
- Cost little or no more than existing packaging.

The problem divided itself into two parts: (1) how to improve package constructions and (2) how to develop distinctive design within the framework established by top management.

The former centered about the cartons-within-cartons in which cellophane rolls were shipped. These were a nuisance to the man at the machine, requiring two or three separate openings to get at the product and cluttering up the machine area.

Working with carton suppliers, Olin engineers found a solution. Inner corrugated cartons for individual rolls were eliminated and replaced by double-wall outer cartons in which the wrapped rolls of cellophane are placed loose, with only corrugated divider inserts. Shipping tests proved one sturdy outer carton was fully as efficient as the cartons-in-cartons and much easier to open.

For the solution of the exterior design problem, the company selected a San Francisco designer to bring a fresh, outside approach.

The designer and the Olin Mathieson design staff went to work with these objectives: (1) The design had to be one that would look equally well in large size on large cartons and pallet loads and in small size on small cartons and tubes. (2) A revision was needed to eliminate the problem of centering the red ball in the "O" of Olin. (3) The motif had to be adaptable to an over-all pattern for wraps. (4) It had to have strong recognition.

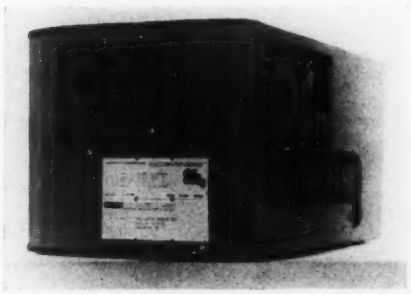
After three months' work, a final design was evolved that met all requirements.

It retains the name "Olin" in the same type as used formerly, but printed in reverse on a black ground. By printing the red first, the off-center placement of the red ball is eliminated. The ribbon motif that carries the word "cellophane" in reverse on a red ground has been elongated. With this arrangement, the shipping label now becomes an integral part of the design whether pasted below or next to the logo.

A modified red-and-black bull's-eye "O" printed on the tops of all cartons gives identification where none had been carried before. Direction copy on top of the containers has been greatly simplified and is presented in bold, legible type.

The new logo has been made in a variety of sizes suitable for the many-sized containers used. Whereas 10 sizes were used formerly, 30 are now available. And whereas the largest, 8 by 8 in., was formerly dwarfed on the largest box for sheets, which was 48 by 48 in., new logos, 46 by 40 in., give billboard recognition to the big sizes.

Instead of plain brown kraft wraps for rolls and sheets, the company now uses printed white waxed kraft wraps carrying an all-over pattern of the logo-



Shipping labels become an integral part of the design, due to the arrangement and placing of the printing. There is ample space for the paste-on label without interrupting identity.

Purpose of change is to make sure machine operator knows when he is using Olin cellophane, says Milton Herzog, divisional vice president and general manager of Olin Film Div., who is shown here comparing the old plain kraft wrap with the new over-all trademark-printed wraps.

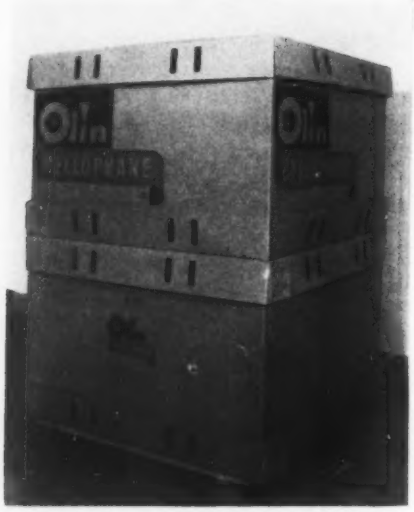
Bull's-eye 'O' printed in red and black gives quick identity to containers no matter at what angle they are placed. Direction copy has been simplified and is printed in bold, legible type.

type. The purpose is to assure positive Olin identification right to the machines.

"We are proud of the way our cellophane handles on wrapping machines and we want the machine operator to know when he is using Olin cellophane," said Mr. Herzog.

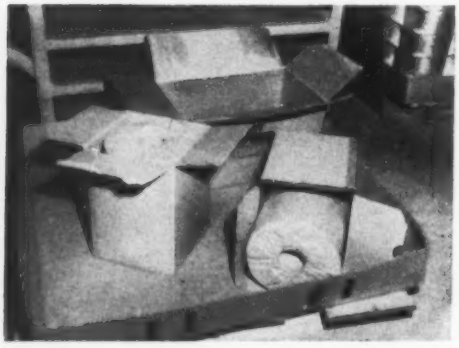
To distinguish quickly MSAT-80 cellophane for meat wrapping from LSAT used largely for produce packaging, Olin has printed the design of the former in red and black and the latter in green and black. Supermarket packaging rooms have welcomed the convenience of these distinguishing colors.

Olin Mathieson feels that its new packaging meets the objectives. There is no mistaking Olin cellophane on a loading platform. The packages cannot be missed by warehousemen. The name Olin is impressed on the mind of everyone who has anything at all to do with the packaging. The Olin package is now more than a receptacle for the product. It is an unmistakable, visual symbol for Olin wherever it goes. If it changes the course of Olin's business, company executives feel, the course can only be upward.

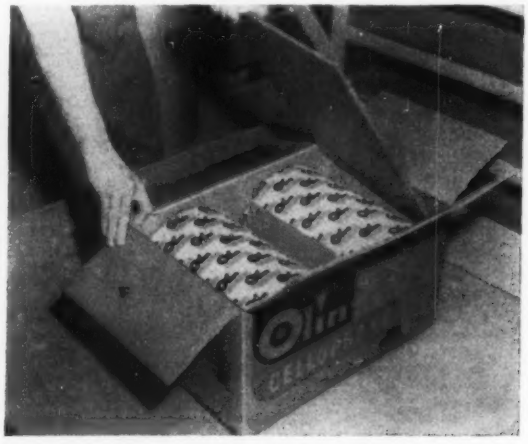


Billboard force of large new logo is strikingly illustrated by comparison of new pallet box (top) with former one with its small trademark printing. Logotypes are now available in 80 sizes to meet requirements of all sizes of containers, whereas only 10 were used previously.

Supplies and services: *Design by Walter Landor & Associates, Design Bldg., Pier 5 N., San Francisco 11. Wraps by Minerva Wax Paper Co., Minerva, Ohio, supplied through Dillard Paper Co., Charlotte, N. C.*

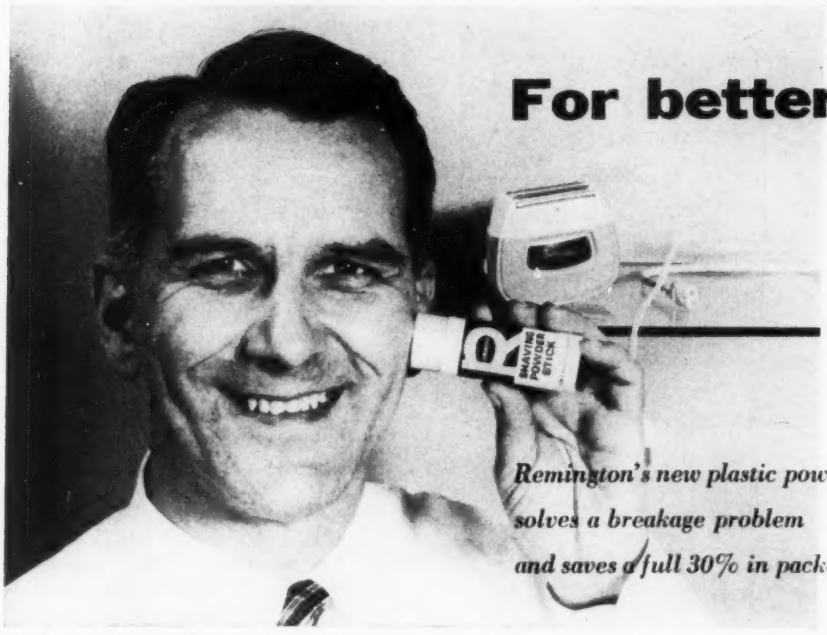


Old way was a nuisance for the machine operator, who always had to struggle with two or three separate openings of the inner cartons.



New way offers wrapped rolls of cellophane conveniently placed loose in double-wall corrugated box with easy-to-remove inserts.

For better shaves



Remington's new plastic powder-stick container solves a breakage problem and saves a full 30% in packaging costs

Push-up construction of cellulose acetate propionate container makes it easy to use, provides full-length support of pre-shave powder stick. Bold new design, printed in brown and yellow, gives immediate brand identity. It will be adapted to Remington Rand's entire line of shaving accessories.

A strong case for the open-door policy in purchasing departments is pointed up by a sleek new plastic container adopted for Remington Shaving Powder Stick by Remington Rand Electric Shaver Div. of Sperry Rand Corp., Bridgeport, Conn.

The chance call of a container salesman received by an imaginative purchasing agent has resulted in an entirely new type of push-up package that (1) overcomes a breakage problem, (2) reduces container costs by 30%, (3) permits use of a powder stick without the additives that formerly detracted from its effectiveness, (4) offers greater consumer convenience and (5) provides a strong new trademark design that sets the pace for forceful new identification of the complete line of Remington shaving accessories.

The package also represents an interesting use of cellulose acetate propionate, a molding material heretofore little known in packaging, but which rates high in dimensional stability, high-gloss finish, freedom from odor and ease of extrusion.

Although Remington believes it has the finest electric shaver for close, fast, comfortable shaves, the shaving-powder stick is recommended for use before shaving by all electric-shaver users and particularly by men inclined to perspire heavily.

Remington's previous package lacked certain advantages. Its design did not get across quick recognition of the Remington name. The cup-type base of metal and paper offered no support to the shaving stick when the spiral-wound paper-tube cover was removed, necessitating a wax coating on the outside surface of the stick to provide structural stability. The old package was wasteful. When the stick was used down to the edge of the base, approximately one-third of it remained inaccessible and unusable.

The new container is an 0.015-in., thin-wall extruded tube of opaque white cellulose acetate propionate—formed, printed and cut in one continuous automatic operation. Because of its pliability, polyethylene was chosen for the molded push-up plug that hugs the inside for a precision fit. A pressure-formed, friction-fit cap of cellulose acetate butyrate, beeded on the inside, provides a lead-in for easy placement.

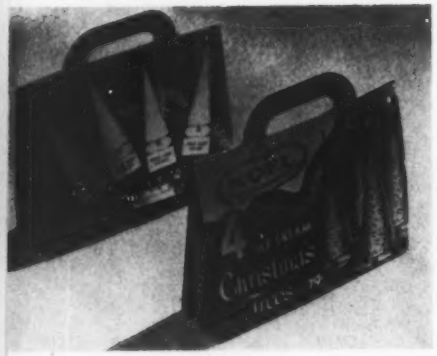
With full length of the tube as support for the stick, breakage reportedly is reduced to a minimum and outside wax coating of the stick is unnecessary. The push-up construction adds consumer convenience and permits 100% use of product.

Supplies and services: *Container by Extruded Plastics, Inc., New Canaan Ave., Norwalk, Conn., using Celanese Forticel and Tennessee Eastman Tenite. Push-up plug by Lumelite Corp., Pawling, N. Y., using Bakelite polyethylene. Inks by Bensing Bros. & Deeney Sales Co., 3301 Hunting Park Ave., Philadelphia 29, Pa. Container assembled by Kolmar Laboratories, Inc., 224 N. Broadway, Milwaukee 2, Wis.*

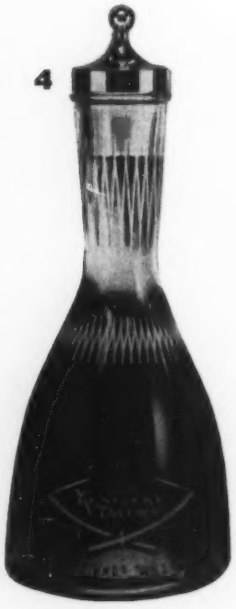
1

2

Packaging Pageant



3



4

5

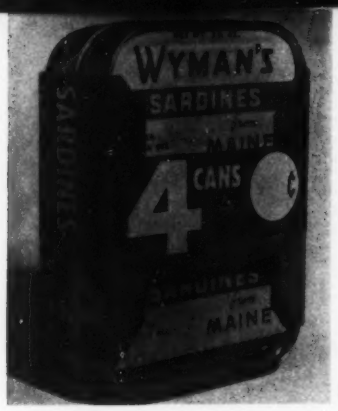
1 Effective mass display of small items that also minimizes the pilferage problem is demonstrated by this oval-shaped, clear acetate container used by Ritepoint Pen & Pencil Co., St. Louis, Mo., to display its line of 25-cent ballpoint pens. The container, which holds one gross of pens, doubles as display unit and dispenser. Pressure-sensitive labels provide complete product identification. Container, Central States Paper & Bag Co., St. Louis, Mo., using Monsanto's acetate.

2 The trend to stronger identity for the industrial package is illustrated by the redesigned family of packages for Diamond Alkali Co., Cleveland, Ohio. On packages for more than 100 industrial chemical products, the company's bold red-and-black trademark in a large white oval, directly over another oval containing product information, is calculated to increase impact. Design, Royal Dadmun & Associates, Inc., Baltimore, Md.

3 Now it's satchel-type carry cartons for ice-cream novelties. With its Noel brand package, Drumstick, Inc., Columbus, Ohio, shows how to use the handy multipack to spur seasonal sales. Place-card cutouts on the back of the carton (left) carry out a party motif. Carton, Marathon Corp., Menasha, Wis.

4 Glenmore's Old Kentucky Tavern whiskey decanter bottle is molded to look like an antique water carafe. A gold-colored, metallized screw cap, white color-applied accordion decoration around the neck and shoulders and a foil label complete design. Bottle and phenolic (Durez) closure, Armstrong Cork Co., Lancaster, Pa. Label, Foilcraft Printing Corp., Brooklyn. Design, Donald Deskey Associates, New York.

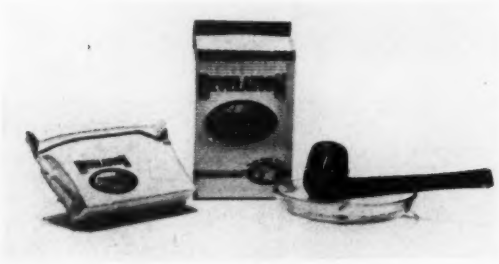
5 Another adaptation of the flip-top-box technique by cigar makers (see MODERN PACKAGING, Dec., 1957, p. 113) is this "Town and Country Alumidor" containing 20 Gold Label Palma Candela cigars. Offered by Gradiaz, Annis & Co., Tampa, Fla., the box is lined inside and out with aluminum foil and has a polyester film overwrap. Carton, Continental Can Co., Gair Boxboard & Folding Carton Div., using DuPont's Mylar and Reynolds' aluminum foil.



6

6 A four-can multipack is credited by Jasper Wyman & Sons, Milbridge, Me., with increasing sales of the company's sardines. The "H"-shaped construction of the can band permits total visibility of package label so that the major portion of the carrier itself promotes the four-can unit. Can band, Container Corp. of America, Chicago.

7

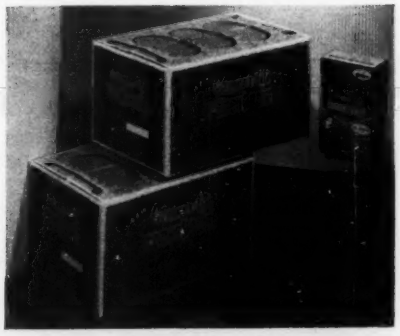


7 Extra protection and greater consumer convenience are offered by Philip Morris' new pouch-and-carton package for Revelation pipe tobacco. The handy heat-sealed fold-over-closure pouch is of glassine, laminated to polyethylene-coated foil to provide an effective barrier against moisture and aroma loss. Pouch and carton overwrap, Shellmar-Betner Div., Continental Can Co., Mt. Vernon, Ohio. Carton, Virginia Folding Box Co., Richmond, Va.

8

8 From Cudahy Packing Co. comes a ham that can be cooked, carved and stored in its original aluminum-foil package. The gravure-printed foil overwrap for the company's "Bar S" ham was selected to prevent moisture loss and odor pickup. Foil overwrap, Shellmar-Betner Div., Continental Can Co., Mt. Vernon, Ohio, using Kaiser Aluminum & Chemical Corp.'s aluminum foil.

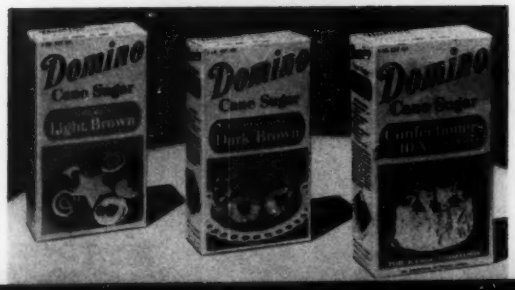
9



9 Combination shipper-display cases printed to simulate cement building blocks are calculated to step up product identification and brand recognition of Glamor-tite Cement Paint, made by Stroub Products Co, Totowa, N.J. The containers are perforated on top so that a single package of paint can be inserted for display. Shipper-display, Hinde & Dauch, Sandusky, Ohio.

10 Color-key bars and improved full-color appetite illustrations are designed by American Sugar Refining Co. to spur impulse sales and to heighten shelf identification of its Domino line of specialty sugars. The colors are orange for Light Brown Sugar, brown for Dark Brown Sugar and light blue for Confectioners 10x Sugar. Color-key bars are repeated on the side panels.

10



11 "Store-shelf-to-dining-table" packaging gets another entry in this line-up of private-mold glass Veryfine brand fruit-juice and vinegar decanters from New England Apple Products Co., Littletown, Mass. A diamond-and-fern design

runs around the shoulder and base of these green, amber and crystal glass bottles. Gallon and half-gallon jugs are equipped with wire bails for easier carrying. Bottles, Anchor Hocking Glass Corp., Lancaster, Ohio; Twist-off metal closures, White Cap Co., Chicago. Paper labels, National Carton & Label Corp., Waltham, Mass.

12 To upgrade the appeal of pure lard as a shortening for cookies, pies and other desserts, Elliott Packing Co., Duluth, Minn., is using full-color vignettes of these items as major design elements on its new waxed cartons for Zenith brand lard. A different dessert is pictured on each of the carton's four side panels. Carton, Marathon Corp., Menasha, Wis.

13 Signifying another step in what may become a major food-packaging trend (see "*Breakthrough in Food Aerosols?*," MODERN PACKAGING, Nov., 1957, p. 116) is a chocolate syrup, packaged in an aerosol pressure can, which is dispensed in a steady, non-aerated stream for use as an ice-cream topping or for making hot or cold chocolate drinks. Marketed by Sifers Chocolate Syrup Co., Iola, Kans., the product comes in a lithographed 16-oz. can with a snap-off styrene closure. Can, American Can Co., New York. Valve and closure, Lemay Valve Co., St. Louis, Mo.

14 An intense "fire-engine red" on carton and collapsible-tube ends dramatically suggests the heating properties of Boyle & Co.'s Flavihist Penetrating Heat Rub and contributes to the package's appeal on self-selection store shelves. Extra color intensity reportedly is achieved by an improved process of lithography. Metal collapsible tube, Sheffield Tube Corp., New London, Conn. Carton, Lanzit Printing Co., Los Angeles.

15 Transparent polyethylene film bags with a scalloped border design that simulates in miniature the design of the table cloth inside have increased the sales of this product for Mahana Textiles Co., New York. The protective bags permit customers to visualize the 54-by-72-inch Krene brand table cloth without removing it from the white-and-coppertone-colored package. Bags, Oneida Paper Products, Inc., Clifton, N.J., using Visqueen polyethylene.

11

12

13

14

15

16

16 National Distillers Products Co. offers Vat 69 Scotch whisky in a new "traveling bottle." Available in half-pints and tenths, the flask-shaped bottle is curved for convenient carrying in pocket or luggage. The molded phenolic plastic cap serves also as a handy jigger for measuring the amount of whisky poured. Bottle, United Glass Bottle Mfrs., Ltd., Glasgow, Scotland. Phenolic closure, Kork-N-Seal, Ltd., London, England. Paper labels, Wm. Nimmo & Co., Leith, Scotland.

17 Dramatic redesign on all four sides of Eversweet Corp.'s waxed-paper carton for orange juice suggests a way standard packaging forms can attain new dimensions of impact and product identification. Carton color—orange decanter design and a large orange drop on top of the carton—is calculated to strengthen product identification. Design, Reinecke & Associates, Chicago. Waxed carton, American Can Co., New York.

18 A sturdy die-cut handle that is an extension of one of the carton's side panels adds carrying convenience to this three-can pack of insect and plant-control products manufactured by United Cooperatives, Inc., Alliance, Ohio. A double-locking top on the green-and-white pencil-stripe-design folding carton keeps the cans securely in place. Carton, Continental Can Co., Gair Boxboard & Folding Carton Div., New York.

19 A vacuum-formed, flocked polystyrene platform contributes to the luxury look of Eli Lilly's new physician's syringe set, packaged in a hinged-lid, simulated-leather-covered metal box. The name "Lilly" is gold-stamped on the cover. Box, Farrington Mfg. Co., Needham Heights, Mass. Cover, Farrington Texol Corp., Walpole, Mass. Flocked polystyrene platform, William A. Crook Co., Watertown, Mass., using Dow Chemical's high-impact Styron.

20 Greater convenience for the chef is offered by the well-identified, color-coded polyethylene bags used by Turek & Meck Foods Co., Burlingame, Calif., to package beef and veal steaks for hotels and restaurants. The bags come in four different colors to distinguish between 3- and 4-oz. steaks. Polyethylene bags, The Dobeckmun Co., Cleveland, Ohio.

17

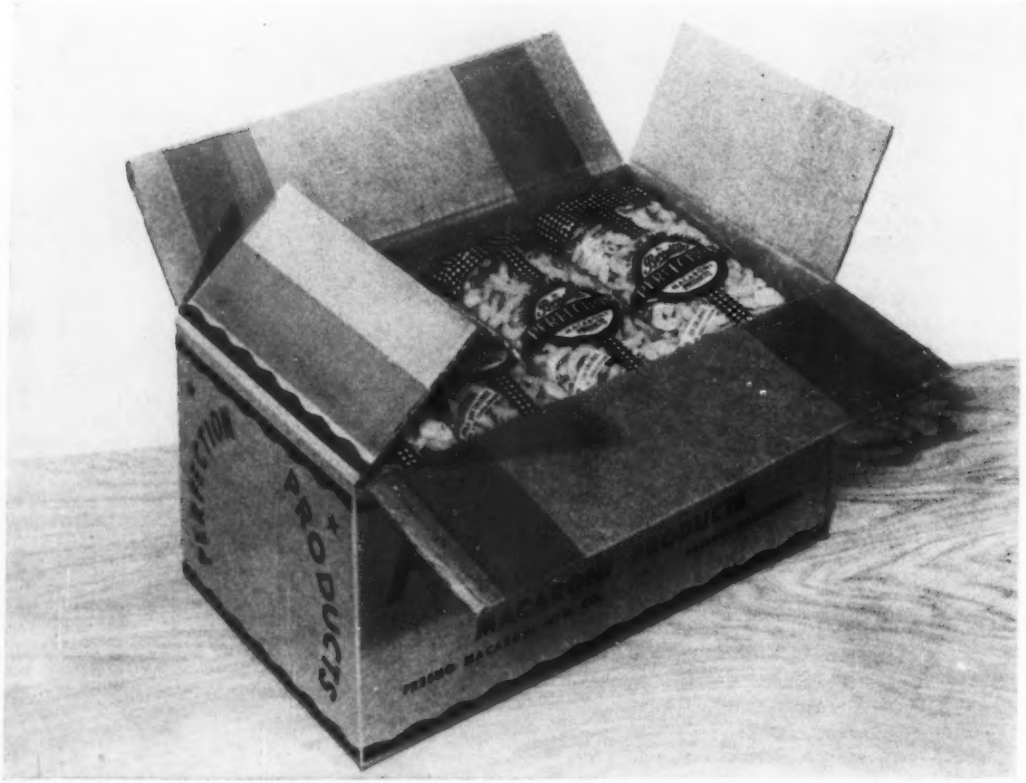
18

Packaging Pageant

19

20

Self-sealing shipper



Adhesive pattern of the self-sealing shipping carton is illustrated by the colored areas on the carton flaps in this photo.

Closing of the carton requires only gentle hand pressure to assure a strong, durable seal.

Easy opening without tearing is accomplished by exerting steady upward pressure on flap.

No glue, no tape, no staples are required to secure flaps on Fresno Macaroni's cartons, pre-printed with cohesive adhesive that sticks to itself and nothing else

Many packaging people have wondered, now that the principle of cohesive adhesive has been employed elsewhere in packaging,* why it couldn't be applied to the flaps of corrugated shipping containers so they could be sealed as quickly and cleanly—by hand—as a self-sealing envelope. Now it is being done. Fresno Macaroni Co., Fresno, Calif., is shipping its products in such boxes and has found them the answer to a special production problem.

Flaps of regular slotted corrugated boxes are treated by the container maker with a special latex-based pressure-sensitive adhesive that is dry and non-tacky to the touch. This material is cohesive by nature; i.e., it sticks tenaciously to another similarly treated surface—but to nothing else. In collapsed position, obviously, the adhesive-treated flaps are so positioned that they cannot possibly adhere to each other or to the flaps of another collapsed carton. These cartons are as collapsible and stackable as untreated boxes. They can be strapped, palleted and shipped by normal methods.

The colorless adhesive is printed in a continuous strip along the top of the outside (or hinge) edges of the end flaps and to the under side of the longitudinal flaps, so that when the flaps are brought over in assembling or closing the carton, the adhesive areas meet and stick.

On the basis of Fresno's experience, the self-sealing carton incorporates a number of benefits to packagers with short-line or intermittent packaging operations that necessitate multiple-size shipping cartons. A single worker can keep pace with an average production line—setting up the container, filling it and sealing it. Since no case-sealing machinery is required, floor space is saved and down time for repair or cleaning is eliminated.

The tack-sealed flaps are as easily opened as they are sealed—a big plus in customer convenience.

Fresno's own problem was this: The company, which markets a variety of macaroni and other food products under the Perfection label, was flooded with orders, but production flow was in a bottleneck simply because there wasn't sufficient plant space in which to add the personnel or machinery needed to accelerate the assembling and sealing of standard corrugated shipping boxes by conventional methods. But since adoption of the self-sealing shippers, developed by a large California container maker, the company reports it has increased production speeds for some of its products by 57% and reduced packaging costs 50%.

In the flap-sealing operation, neither heat nor compression is necessary. Simple hand pressure forms a strong, durable seal. Only a steady, gentle tug on the flaps is required to open the container without tearing the flaps. Laboratory tests on the self-sealing shipper reveal that its bond is resistant to extremes of heat or cold, as well as to extremely rough handling.

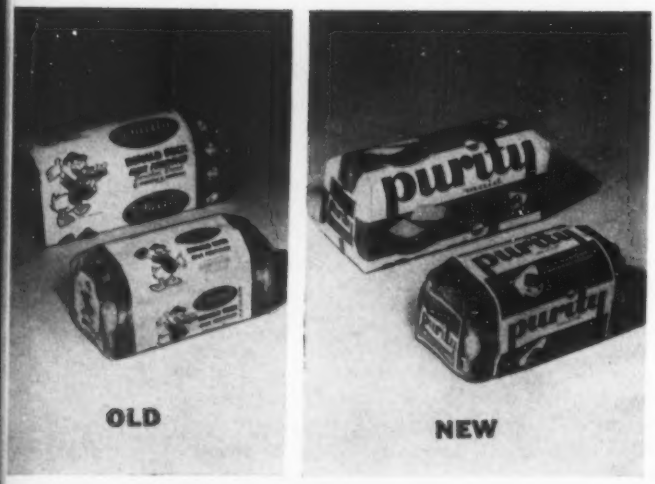
Because no auxiliary machinery or material is needed with the self-sealing shippers, one employee working in a smaller amount of space can assemble, pack and close a greater number of shipping units than was possible under the former set-up.

In addition to the advantages already cited, Fresno says it has reaped an auxiliary benefit from using self-sealing shippers. Because the adhesive is under the top carton flaps, the entire surface of the shipping carton is preserved for product name and cover descriptions.

Supplies and services: *"Presseal" corrugated shipping cartons developed and produced by Growers Container Corp., P.O. Box 238, Salinas, Calif.*

Split-second sealing of the cartons eliminates waste motion. One worker can easily keep pace with an average production line. Note how under-flap adhesive preserves the entire carton surface for product name and other copy.

*See "Cohesive Papers," MODERN PACKAGING, Nov., 1951, p. 82.



Greater impact of Purity Maid name is evident in a glance comparison of new bread wraps with old. Company took a gamble when it dropped Donald Duck from its best-selling item, but it paid off in even greater sales. Note how new end labels carry out package design when loaves are displayed ends out.

Is success

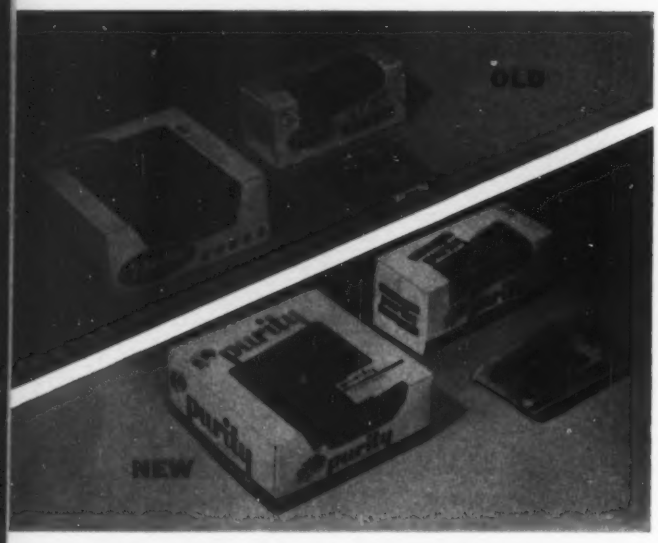
Why does a best-selling regional company completely redesign the packaging of its entire line—even to changing the name of an item that had constituted 70% of its total sales?

That's exactly the step decided on two years ago by Purity Baking Co., Charleston, W. Va. The result: a 15% sales increase in the first six months of the new packaging format.

The reasons behind Purity's decision reflect the necessity in today's self-selection marketing climate for a product manufacturer to change with the times; to accept the "packaging-merchandising" concept and tailor it to his needs. In Purity's case, the thinking went like this:

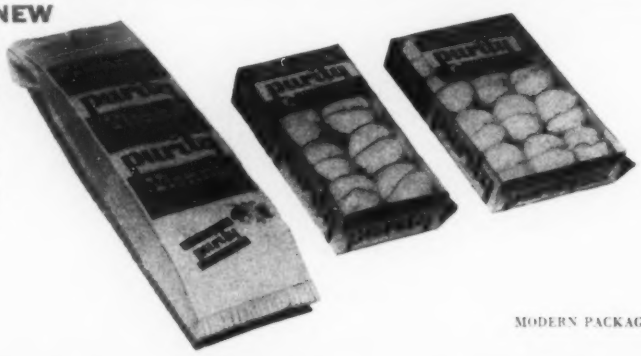
First, a local company must step up its package design if its products hope to hold their own on increasingly crowded store shelves alongside the big, nationally advertised brands. (You'll notice more recognition of this fact of packaging life in the upgraded design being instituted by local dairies and breweries, for example.)

Second, despite the obvious sell appeal afforded by visibility packages that show the product, there's



The Purity Maid, new trade character for added family identity, appears on all Purity Maid packaging. Company also has adopted plain white background for its folding cartons and glassine pie envelopes so that brand name stands out sharper than on former pattern-printed background.

NEW



There's no question of who makes this loaf of Vienna bread. The Purity name is emblazoned three times on redesigned bag, only once on previous bag (above). The concept of brand identity is also carried over to the visibility cartons for brown 'n serve rolls.

good enough?

Not for Purity Baking Co., a leading regional baker whose sales are up 15% since it scrapped its old packages and redesigned for greater self-service brand identity

a real need for stronger brand identity—to establish a family relation for the entire line and entrench brand recall in the shopper's mind.

Fortified by these reasons-why, Purity scrapped its 38-year-old trademark and began a package-redesign program. As a first step, a nationally known designer was called in to help give Purity packaging its new look.

The company's redesign program was really a start-from-scratch operation. A new trade character, "The Purity Maid," was evolved from the company name and appears on the wrappers and cartons of every item in the Purity line. It is a carton treatment of a little girl in a Shaker bonnet (to suggest the freshness and old-fashioned goodness consumers want in bakery products).

Interestingly, the company's best-selling item, white bread, had for years been sold under the Donald Duck name, with the wrap featuring a large likeness of this Walt Disney-licensed character. It alone accounted for 70% of the baker's total sales. But Purity abandoned Donald Duck in favor of The Purity Maid, illustrating management's determination to back its new family-packaging concept all the way down the line.

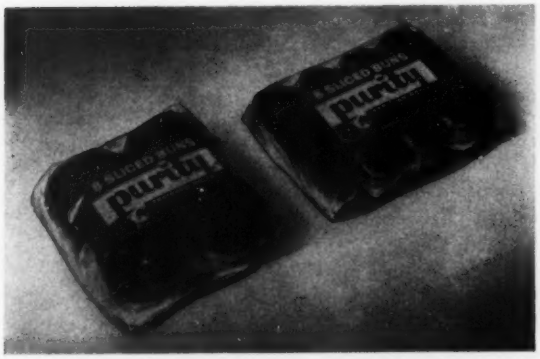
Next step was to punch up the "Purity" name and give it a brand identity it never before had. On the old Purity (Donald Duck) white-bread wrap, the company's logotype was enclosed in a small, contrasting-color oval. The same subdued treatment was given all of the other packages comprising the Purity line.

But it's a different story on the new wrap, whose basic design is alternating red and white bands. Running the full length of the white bands is the name "Purity" in giant lower-case letters, alternately red and brown. Beneath is the word "Maid" in small, red script. On the red band is the Purity Maid trademark and promotional copy. This same design appears on the wraps for other types of bread in Purity's line, with identification simplified by replacing the red band with brown for wheat bread, green for rye bread, etc.

Purity bread end labels are similar to the wrap design, to further the look of brand identity.

Purity Maid wrapped up this package-redesign program by incorporating its new trademark and king-size brand name on all the other baked goods in its line. These include see-through folding cartons containing cakes and doughnuts, glassine pie envelopes and cellophane-wrapped frankfurter rolls and hamburger buns. On the company's new folding cartons, the Purity Maid name stands out sharply against a clean, white background. On the old cartons, the cramped brand name was made even less conspicuous by a pattern-printed background.

The company's upgraded design policy extends as well to all promotional media, thus putting the finishing touch on a design success story that began with a well-calculated risk. Purity Maid's experience illuminates what should be a packaging motto: "Today's the time to use tomorrow's package."

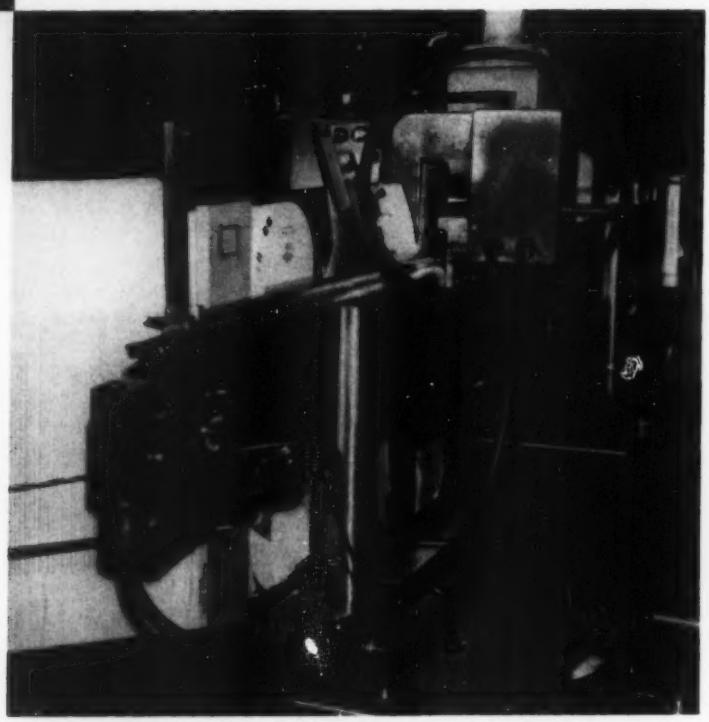


Full visibility plus prominent brand mention are combined in Purity's cellophane packages of hamburger and frankfurter buns with paper label.

Supplies and services: *Design program by Frank Gianninoto & Associates, 133 E. 54 St., New York 22.*

Cost-cutting

Coded data debossed on the packaging line in pre-printed rectangle on end flap tells where package was filled. This now satisfies legal requirements and makes it possible to use the same package in plants at many different locations.



Cartons are fed in the usual manner, with coding attachment (circle) mounted on rim of conventional filling machine to deboss code as flaps are opened. Cables connect coder with impulse switch at carton-release gate to synchronize the completely automatic operation.

Among the "hidden" problems of simplifying carton design for multi-plant packages are Government or industry requirements for label identification of the manufacturing location. But National Dairy Corp. has eliminated the need for separate printings of cartons for each of its Sealtest ice-cream plants by integrating into its packaging operation a new branch-labeling debosser. This attachment to the regular cartoning machine automatically stamps the local plant code on the carton's upper locking slot panel without defacing the design.

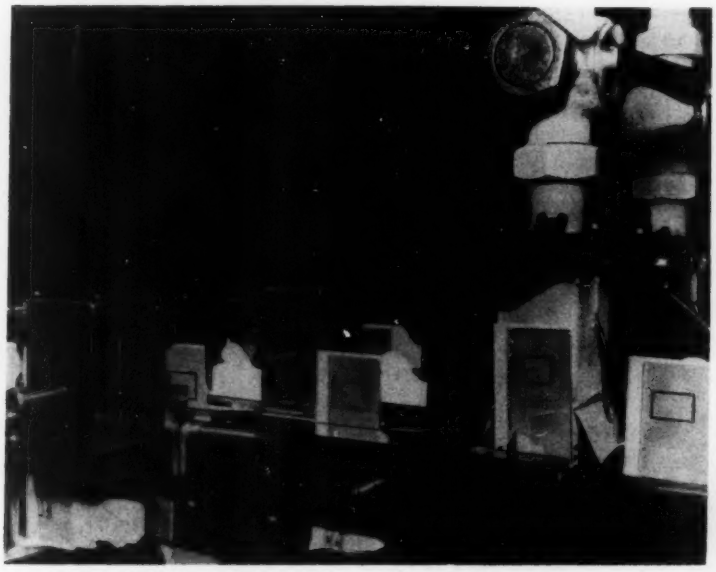
This inkless method of plant identification can be applied in other industries to help streamline the packaging operations of the companies where branch coding does not exist.

National Dairy's adoption of the coder follows a successful campaign for its acceptance among state and city boards of health by the Paraffined Carton Research Council. It also marks another step in a simplification program during which the company has reduced its ice-cream-carton line to just four basic designs—one each for vanilla, chocolate and strawberry and a fourth for lower-production flavors (imprinted prior to filling).

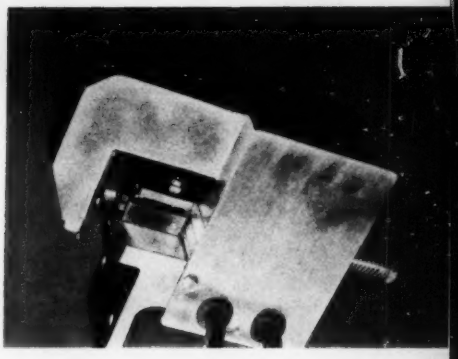
Under the new branch-labeling technique, carton blanks arrive at National Dairy plants completely

carton coder

Sealtest meets legal requirements by identifying filling plant with debossed code on carton flap, thereby enabling a single printing to serve multi-plant operations



Cartons proceed from coder at left to filling head. Note second coder located at rear on this tandem filling line.



Close-up of attachment showing coding stamps and anvil against which they hit. Changeable die stamps provide two lines of type up to six characters each; both letters and numerals are used.

printed, but with only the home-office address appearing. As blanks are fed into the filling line, the upper locking slot panel passes between the jaws of the debosser attachment. Synchronized by an impulse switch positioned at the release gate of the carton-blank magazine, the debosser automatically impresses its two-line coding within a pre-printed rectangle on the carton flap. The carton then moves on to the filling and closing stations. At no time does the coded surface come into contact with the ice cream.

The compact coder, which stamps two lines of up to six characters each, mounts easily on the packaging line, without the need for extensive alterations.

Other advantages of the branch-plant coding system are: (1) carton inventories can be transferred among plants if one unit runs short; (2) if a new carton design is introduced, existing stocks can be reduced more quickly because all plants use the same package, and (3) cartons of universal design can be ordered at lower cost in larger quantities.

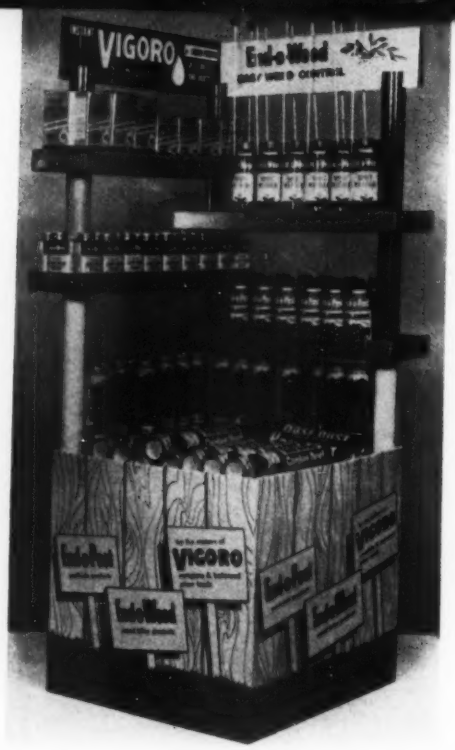
Supplies and services: *Coding attachment and filling machine by Anderson Bros. Mfg. Co., 1907 Kishwaukee St., Rockford, Ill. Cartons by Container Corp. of America, 38 S. Dearborn St., Chicago 3, and Sutherland Paper Co., 243 E. Paterson St., Kalamazoo, Mich.*

Three-way floor stand

A floor merchandiser that can be used as an island display offering consumer access from all four sides (or that can be set into a corner or against a wall) is offered by Swift & Co.'s Plant Food Div. for display of its Vigoro, End-o-Weed and End-o-Pest garden products. Made of corrugated board and spiral-wound fibre tubes, the colorful display is shipped flat and reportedly can be set up in five minutes. An insert tray in the bin of the floor stand has die-cut holes at three corners for receiving three six-foot core tubes. Vari-colored cylinder sleeves and four tray-type corrugated shelves with corresponding die-cut holes slide down over the tubes and lock into position. Dealers may arrange products as desired. The base is wax coated to protect against floor moisture.

Product identity on the red, yellow, green and orange stand is worked into a fence-and-lawn design that runs around the bin. Bolder product copy on panels inserted into the slotted tops of the fibre tubes calls the display to the attention of distant shoppers.

Supplies and services: *Display by Container Corp. of America, 38 S. Dearborn St., Chicago 3.*



Display Gallery

Life-size demonstration on the counter

This three-dimensional display for a woman's beauty aid achieves the full impact of actual product demonstration within the limited confines of a 14-by-22-in. counter merchandiser. The product is Chimes eyelash and eye-shadow combination, made by Campus Chimes Cosmetics Corp., New York. It is displayed on a full-size model of a woman's face, which is part of a vacuum-formed sheet of opaque white, high-impact styrene. Six different styles of the product available are displayed in a formed cellulose acetate blister alongside the "model." The Chimes package, a transparent hinged polystyrene box, is carried as part of the display in a rectangular "bulletin board" at the bottom of the unit. The printed sheet of product information at bottom left can be changed to suit varying types of retail outlets or for seasonal appeals. The display is sprayed in four colors.

Supplies and services: *Display and cellulose acetate blister by Nordic Plastics Co., Inc., 383 Douglas St., Brooklyn 17, using acetate supplied by Joseph Davis Plastics Co., 450 Schuyler Ave., Arlington, N.J. Polystyrene box by Diamond Plastic Box Co., 1215 Midvale Ave., S. W., Roanoke, Va., using Dow's Styron.*

Self-service sleeve

A three-color fibre sleeve that dealers remove from the corrugated container in which Spark-L-Ite driveway reflectors are packaged forms a dramatic self-service display unit for the products, manufactured by Dynamic Specialties Corp., Birmingham, Mich.

Pairs of vertically aligned, die-cut tabs on the sleeve fold outward to form brackets through which the stakes of eight reflectors are inserted for display purposes. The remaining four reflectors are secured inside the sleeve through holes in a die-cut corrugated insert which also serves to brace the sleeve in its rectangular position. During shipping, this insert is used as a separator.

Color scenes and descriptive copy printed on all four panels of this display sleeve show how the reflectors, which pick up automobile headlight beams, can be used to outline driveways so that they can be negotiated more easily in darkness, fog, rain, snow or other conditions that are likely to cause poor driving visibility.

Supplies and services: *Display by Western Paper Box Co., Sub. Stone Container Corp., 1111 Bellevue Ave., Detroit, Mich.*

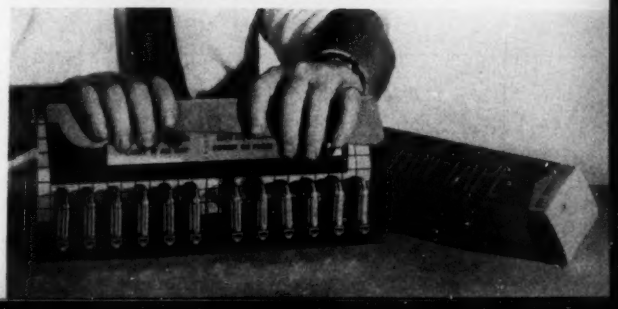
Display Gallery

Protective shipper opens into wide-angle display

An example of how effective display can be achieved at low cost is demonstrated by this "wide-angle" counter merchandiser for Thin Tape metal tape rules, a Product of Evans Rule Co., Elizabeth, N.J. The one-piece, die-cut paperboard display has a glued base and is vertically scored in its center so that it can be bent back easily for full product visibility from two different directions. It holds a dozen rules—six on each side—and measures 12 in. wide by 9 in. high in set-up position.

The display also is an integral part of the carton in which it is shipped. Three horizontal score marks allow it to be folded over (with the rules in place in the slotted base) and inserted into a 2½-by-2½-by-12¼-in. folding carton, as shown in the bottom photo. To set up the display, the dealer merely removes it from the carton, flattens it out and bends it back along the vertical score to form a rigid counter unit. Lithographed in black, yellow and white, the display features the product name, "Thin Tape," in bold, thin letters.

Supplies and services: *Display and carton by Chopp Printing Specialties, Inc., 350 Hudson St., New York.*



Hershey solves a problem

After 25 years in hand-tied, twist-top bags, this company's famous chocolate kisses now appear in economical, symmetrical heat-sealed packages geared for front-line self-selection stacking

When Hershey Chocolate Corp. decided to redesign its Chocolate Kisses cellophane-bag packaging, it set two apparently contradictory aims for the new package: First, it had to satisfy modern self-service requirements to enable the product to compete more successfully on dealers' shelves. Second, it had to retain the basic look of distinction that had built up strong consumer recognition through the years. Sales since introducing the new package indicate success has been achieved on both counts.

Hershey's solution was to modify its old package in three significant ways. First, the new pouch-type package is squared off at top and bottom, thus providing a symmetrical, evenly filled package that stacks easily for mass display. Second, the easy-to-tear crimped heat seal offers consumers convenience in opening the package. Third, the printed banner at the bottom of the package has been changed to include a prominent price spot, along with product information. On its former packages, which the company had used without change for many years, this banner merely repeated the label copy and ingredients.

The end result of these seemingly simple changes is a package eminently suited for self selection. Favorable comments from retailers and customers, Hershey says, testify to its sales success.

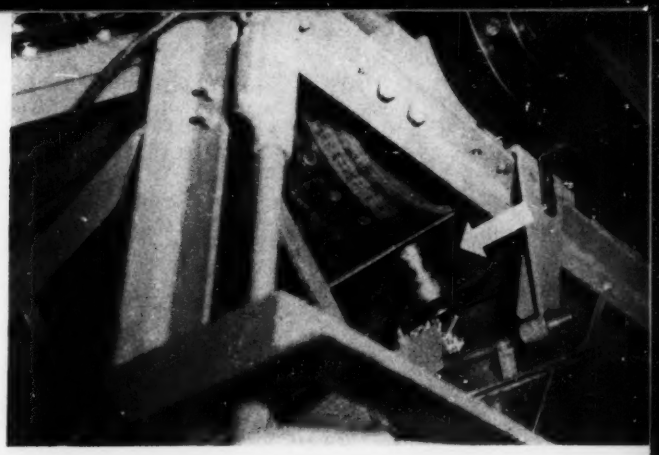
In making its packaging change-over, the company effected economies on the packaging line and at the same time increased productivity by 300%. It adapted the weighing machinery used in its former filling operation to four newly installed automatic machines that form tubes from a roll of cellophane, seal, fill and cut off seals, to provide a continuous stream of 5¾-oz. pillow-type packages. Although Hershey does not disclose production figures, the manufacturer's rated capacity of each machine is 40 to 48 packages per minute.

A magnetized conveying system transports steel carriers, each containing one fill of chocolate kisses, from the weigher along an inclined belt to the package-making machinery, where the carriers roll over powerfully magnetized pulleys, discharge their contents, then return empty to the weigh station for refilling. The entire process is carefully timed to insure a smooth, continuous automatic flow.

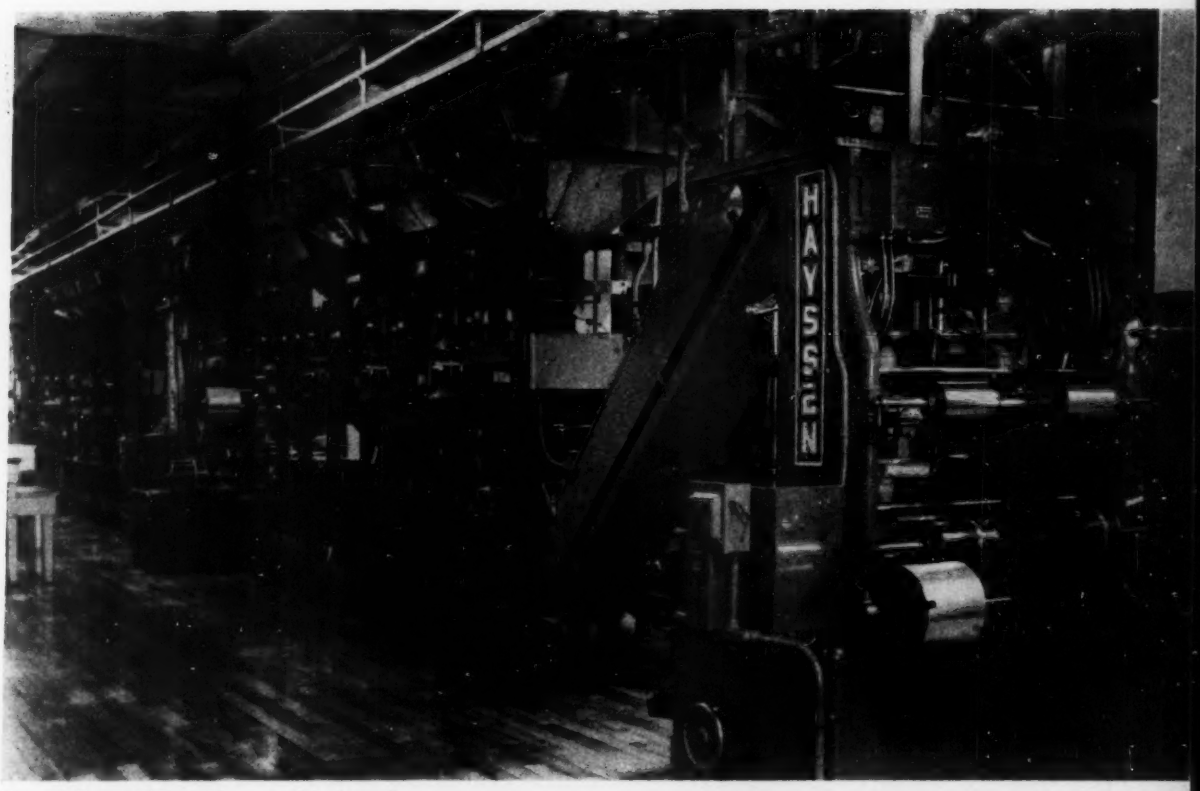
Its new procedure, Hershey reports, has increased production efficiency while keeping packaging costs down. The printed roll film is obviously less costly than the previous prefabricated bags and tie tapes. Under the former packaging set-up, one girl operated a machine that weighed the kisses and filled them into cellophane bags. Two other girls twisted the tops and closed the bags with a strip of cellophane tape. The three girls worked as a team and rotated jobs.

Supplies and services: *Printed cellophane film by U.S. Envelope Co., 21 Cypress St., Springfield 2, Mass. Forming, filling and sealing machine by Hayssen Mfg. Co., 1305 St. Clair Ave., Sheboygan, Wis. Magnetic conveyor system by Eriez Mfg. Co., 1945 Grove Dr., Erie, Pa.*

Glance comparison shows how Hershey's new cellophane pouch of chocolate kisses is better geared for self selection. Symmetrical, heat-sealed pillow pack, more efficiently produced, is easy to stack for mass display. Note prominent price spot and tearing instructions.



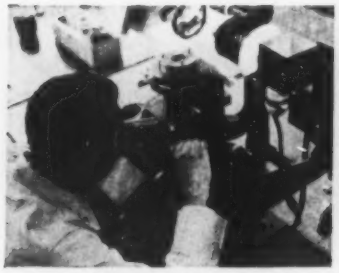
Magnetized conveyor system provides continuous flow of one-fill steel carriers (arrow) from weighing machine to package maker and back again. Shown is carrier discharging its contents as it rolls under powerful magnetized pulley.



Complete system is shown in this shot, taking in two of the four packaging lines in Hershey's operation. In foreground, note rear view of package-making machine, supplied with kisses by a series of four hopper-fed weighing stations from carriers that travel up the inclined conveyor belt at right center. Visible are rolls of printed cellophane from which are formed tubes that are cut into a continuous stream of pouches.

Discharge end of package-making machine deposits sealed pouches on conveyor belt. Heat-seal bar closes to form double seal that becomes top of one package and bottom of the next.

Owens-Illinois Assures You A Complete Packaging Approach



Co-ordinated Research

Pure research into fabrication of glass, *packaging research* into processing and handling methods in customer plants, *market research* into consumer attitudes. All add up to greater packaging value.

Engineered Design

At Owens-Illinois, your package's *three* needs are taken into account: 1) Considerations of its function in the retail store, 2) its operating efficiency, and 3) its consumer utility.

The Right Container

Versatility of facilities and talents make O-I your best source of supply. In container development—beauty, utility, tradition are blended in the right proportions for your product's needs.

The Right Closure

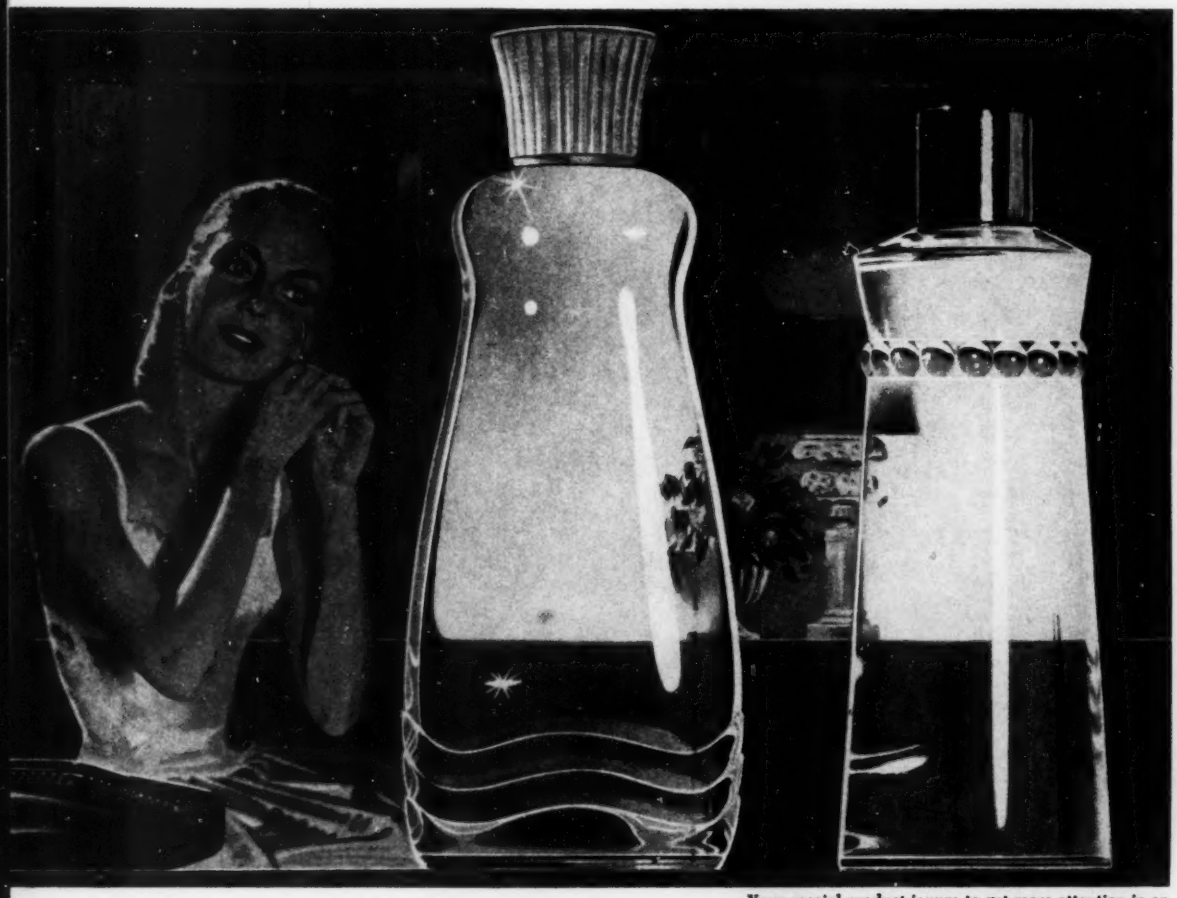
Through long and continuing research O-I has developed the most advanced metal and plastic closures. Helping you choose the right closure is another function of O-I's packaging service.

Needed Fitments

O-I specialists are keenly aware of sales benefits derived from plastic shaker and pour-out fitments which are not "gadgets" but which increase consumer satisfaction with your product.

Merchandising Cartons

Modern cartons are developed only through systematic consideration of their opportunity to serve you in the retail store and warehouse . . . as well as on your own filling line and in transit.



Your special product is sure to get more attention in an attractive custom-container . . . designed by Owens-Illinois

The custom concept of fine packaging

HERE ARE TWO EXAMPLES of an Owens-Illinois specialty—*custom-container design*. For the right product, the distinctive product, there's no wiser merchandising buy!

Designed for your product by Owens-Illinois, a custom container pays off in many ways. *More attractive,* it draws immediate attention to your product . . . *more distinctive,* it works toward positive buying action . . . *more functional,* it helps build repeat sales by protecting your product—by keeping it fresh—by making it always easy to use.

At Owens-Illinois, custom-container design is but one part of O-I's Complete Packaging Service. A large staff of experienced designers and packaging experts are ready to work with you in the development of your *complete* salespackage—stock or custom containers of all types, capacities and designs—label designs—special fitments—metal and plastic closures—proper closure liners—merchandising cartons. Everything you need for a successful salespackage!

For more information, call the Owens-Illinois branch office near you today.

DURAGLAS CONTAINERS
AN (I) PRODUCT

OWENS-ILLINOIS
GENERAL OFFICES · TOLEDO 1, OHIO

Better film for baked goods

PHOTO COURTESY DU PONT

Bakery men lead the switch to polymer-coated cellophane because its exceptional resistance to fats and oils boosts both the shelf life and appearance of their extra-perishable products

Six years ago[1] polymer-coated cellophane was a packaging curiosity, produced in limited quantities by only one company and used by a handful of packagers. Suddenly, within the last year, it has shot into prominence. Millions of pounds will be consumed this year by hundreds of different packagers and predictions are heard that within a few years it will be the biggest of all heat-sealable cellophanes.

What has brought about this sudden trend?

First of all, ticklish technical problems in applying the polymer coating (a compound using saran resin) have been solved, breaking a production bottleneck. All three primary cellophane producers now offer a polymer-coated grade.

Second, laboratory and field experience, backed up by published reports,[2] have thoroughly established the superior qualities of polymer-coated cellophane in many applications and—contrary to other types of cellophane—the price curve has been down.

The trend is most evident in the baked-goods field, where the special properties of the polymer-coated film—essentially an economical combination of the

[1] See "Sunsweet and K-202," Modern Packaging, April, 1951, p. 122.

[2] See "A New Polymer-Coated Cellophane," Modern Packaging, Jan., 1956, p. 139, and "Saran-Coated Films," Modern Packaging, June, 1957, p. 151.

best properties of cellophane and saran films—are most aptly illustrated.

Used now for everything from cake to pretzels, polymer-coated cellophanes enhance the appearance and substantially increase the distribution range of conventional bakery items, and guard both looks and quality of frozen baked goods. Latest reports from the field credit the special films with upping sales 10 to 30% and increasing shelf life of these products up to 50%.

Other high-fat products are taking advantage of the protective qualities of this material. Polymer-coated films now are being used as a package for soup concentrates, dates, nuts, cheese, candies and fried chips.

Despite their premium price, 10 to 17 cents more per pound than the MSA (69 cents) or MS (62 cents), the polymer-coated cellophanes now on the market appear to pay off on one quality alone that makes them particularly suitable for bakery packaging: They reject penetration and degradation by fats and oils. In addition, they have more strength, longer life, stronger heat seal and the same sparkling clarity and good machine-handling qualities as conventional cellophane.

Ordinary cellophane, of course, is an excellent barrier against grease. But the heat-seal coatings on MS and MSA varieties deteriorate under attack by this ingredient, resulting in a loss of resistance to gas and water-vapor transmission.

Because the polymer coating restricts passage of moisture, it preserves the dimensional stability of the film—preventing wrinkling, curling, striation and cockling—and at the same time boosts preservation of products with either high or low moisture contents. Resistance to gas transmission protects goods that are sensitive to oxidative changes.

Two special varieties of polymer-coated cellophane show exceptional resistance to fogging, caused by internal condensation of moisture, which often spoils the appearance of film-wrapped products under refrigerated display.[3]

One critical factor in shelf life of baked goods—prevention of mold growth—is not normally associated with the packaging material. But the results of research just released by a major supplier[4] shows that a property of one polymer-coated cellophane does influence this vital point. In the tests, dinner and sweet rolls were baked at 390 deg. F. in aluminum pans, then wrapped directly from the oven without undergoing the customary cooling period. The hot-wrapped products, stored at room temperature, lasted for 21 to 57 days without showing any signs of mold growth. Rolls wrapped at room temperature developed mold after six days.

Normally, such a procedure is impractical because hot-wrapped products cloud the film with condensed moisture. While the non-fogging film used in these experiments did not prevent initial fogging, the condensed moisture disappeared after an average of 16 hours. Further experiments indicate that this initial fog period can be further shortened by

[3] See "Non-Fogging Cellophane," MODERN PACKAGING, March, 1957, p. 172.

[4] E. I. du Pont de Nemours & Co., Inc.

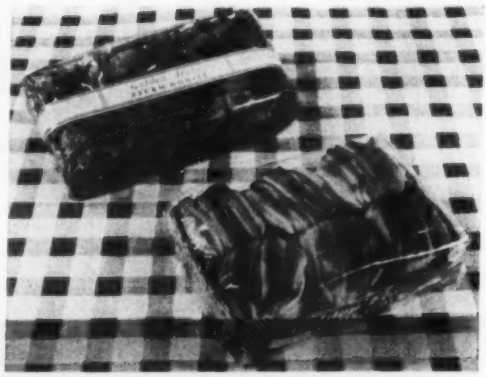
PHOTO COURTESY AMERICAN VISCOSE

IMPERMEABILITY *extends distribution range*

Low transmission rates with these films slow staling and thus widen effective marketing area. Prime examples are this Raudenbush raisin loaf, now shipped throughout the country, and Baldridge's white bread that reaches rural Texas communities by virtue of its 50% increase in shelf life. Toughness of polymer-coated film and strength of heat seal also minimize breaking, cracking and tearing of wrap.

PHOTO COURTESY DU PONT

PHOTO COURTESY DU PONT



Code period of these dinner and sweet rolls made by Golden Flake Butter Gems is boosted 50% by a 450-gauge overwrap strong enough to withstand increased distribution distances in either a straight or a tray-wrapped package.

High-shortening specialties, such as Venus Foods' fruit bars, last longer because the polymer coating prevents film deterioration.

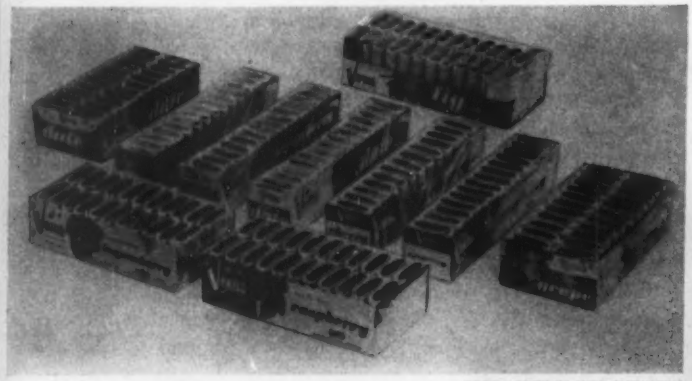
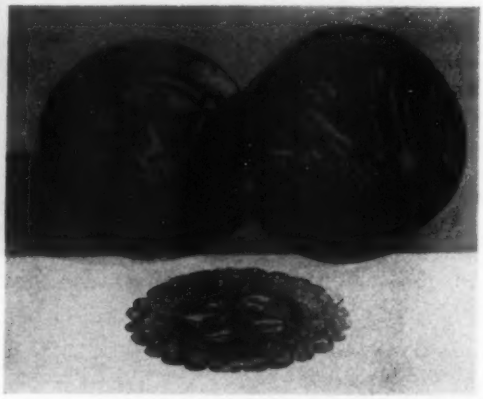


PHOTO COURTESY OLIN MATHIESON

GREASEPROOFNESS
protects quality



Fancy packs of Continental Baking Co.'s fruit cakes have four-month shelf life, resist drying when protected by polymer-coated cellophane.

PHOTO COURTESY OLIN MATHIESON

allowing the product to cool slightly, yet still keeping it hot enough for practical "sterility."

For present market applications, the barrier characteristics have undoubtedly exerted greatest influence on bakery men toward adoption of the polymer-coated films. However, there are other features of almost equal importance:

The polymer-coated films have exceptional transparency and sparkle.

They also have increased resistance to cracking, breaking and tearing, and do not shrink.

The films, reportedly, will not stick to icings—an important factor in wrapping unboxed cakes.

They handle well on wrapping machines, are reportedly easier to convert on bag-making equipment than standard double-wall cellophane and are excellent printing mediums.

Impermeability and strength

Perhaps the most severe test this material has undergone from the standpoint of water-vapor transmission and strength is as an overwrap for a raisin loaf that is shipped by mail order throughout the country—and even to Europe—by Raudenbush Baked Foods, Inc., Ashland, Pa.

Because of the vast distribution range, it is essential that the film keep this product fresh and moist for five weeks. In addition, it must withstand low temperatures, because many customers freeze the product to extend its shelf life further.

Not only does the polymer-coated cellophane meet these tests, but it also holds up extremely well during subsequent handling in stores and supermarkets, according to Raudenbush officials.

At the opposite end of the bakery scale is white bread—an extremely short-lived product that nevertheless offers the same kind of challenge to packagers. Here, a 300-gauge polymer-coated cellophane has prevented staling and upped shelf life of sandwich-loaf white bread to three days—a 50% gain—for Baldridge Bakery, Lubbock, Tex.

This boost is particularly important to the com-

pany, which distributes in 32 West Texas counties. The film's resistance to cracks and tears, and its superior appearance have improved distribution, particularly on long country routes, and are credited by the company with boosting sales about 10%.

Several days of extra shelf life also are reported for a 100% whole-wheat bread packaged by a leading Pennsylvania bakery. This company notes a marked improvement in package durability, using a 450-gauge polymer-coated film, with a corresponding decrease in cracking, breaking and tearing.

Greaseproofness

Polymer-coated films have repeatedly demonstrated their ability to extend the shelf life of very high-fat products.

A notable example is fruit cake—baked in August for consumption in November and December. Continental Baking Co., Rye, N.Y., and Kingston Cake Co., Inc., Kingston, Pa., successfully employ the polymer-coated material both as inner wraps in canister packs and as sole wrappers for cakes held in U-boards. Both of the companies are enthusiastic, likewise, about the film's clarity and sparkle, which dresses up the product for seasonal sales.

Venus Foods, Los Angeles, uses the packaging material to protect high-shortening fruit bars. Here, the material's heat-sealing strength and freedom from clouding and cockling add to shelf life.

Sales gains of 25% and an increased shelf life of 50% for dinner rolls and breakfast buns are credited to the grease resistance and durability of a 450-gauge film by another company, Golden Flake Butter Gems, Philadelphia, Pa. Here an expanded and more flexible distribution system is now possible, with less frequent deliveries to customers and longer shipping distances.

Appearance of a package is vitally important to

SPARKLE and CLARITY *add sales appeal*

PHOTO COURTESY OLIN MATHIESON

Appearance of Colonial's angel food and lemon chiffon cake packages remains smooth and glossy for longer periods. Today, 80% of this firm's bakery line is wrapped in polymer-coated film.

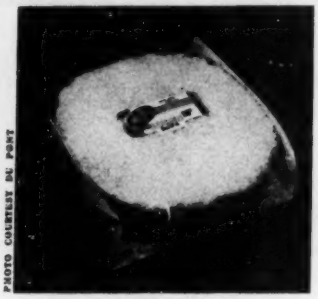


PHOTO COURTESY DU PONT

30% sales increase for cakes is credited by Malbis Bakery officials to film's appearance and the fact that top-iced baked goods will not stick to the packaging material.

PHOTO COURTESY OLIN MATHIESON

Crisp look of cinnamon-nut roll produced by Baker Boy Bakeries is maintained even after it has completed a cross-country trip.

Double-wall bag of polymer-coated film for Murray's cookies insures extra-long shelf life and rugged construction needed to withstand customer handling in supermarkets.

PHOTO COURTESY OLIN MATHIESON

Sparkling bag for Buckeye pretzels gives product the full benefits of all-around visibility as well as preserving the product's low moisture content. It is credited with raising sales 15%.

PHOTO COURTESY DU PONT

sales of such high-impulse foods as layer cakes, cookies, fruit cakes and other bakery specialties.

Clarity and sparkle

A dramatic sales increase—fully 30%—is credited to the crisp look of a 450-gauge polymer-coated cellophane used by Malbis Bakery Corp., Mobile, Ala. The plant superintendent reports that the package holds its original shape longer without wrinkling or puckering and does not fog with changes in temperature. He also finds that the material does not stick to top-iced baked goods and

PHOTO COURTESY DU PONT

Freezing of baked goods is a rising trend and a special variety of polymer-coated film resists fogging in the package even under these adverse conditions. Shull's lady fingers—primarily a refrigerated product—utilize the material and have increased both sales and distribution range.

that the product looks much better at the end of the code period, though the company has not yet changed its code dates to capitalize on this protection.

A firm that has been quick to utilize this latter advantage, though, is Baker Boy Bakeries, Los Angeles. This company produces a cinnamon-nut confection roll. Wrapped in polymer-coated cellophane, the product now travels all the way across the country, arriving fresh for East Coast customers.

Improvement in package appearance following its switch to a 450-gauge polymer-coated film for packaging cakes is cited by Lampert Baking Co., Houston, Tex., as responsible for a 10% gain in sales. The clincher is the fact that sales held up even during the summer, a slow period for these products.

Johnson Biscuit Co., Sioux City, Iowa, has increased sales by 20% and states that a printed, polymer-coated cellophane has greatly improved the appearance of its cookie bags—remaining glossy and smooth without wrinkling or puckering and seemingly giving as good protection as its former double-wall cellophane bags.

Hot-dog buns also depend on the coated films for increased sales and shelf life, according to Hall Products, Inc., Portsmouth, Va. Gloss and superior seal are credited here as the major factors.

Machinability

Along with brilliant appearance, Buckeye Pretzel Co., Williamsport, Pa., finds that polymer-coated cellophane is easier to convert on its bag maker and is easier to fill and label than standard double-wall cellophane. It also credits the film's brilliant appearance with a 15% sales increase.

Another user reports that a single-wall bag made from a 300-gauge polymer-coated film not only gives better protection than a former double-wall glassine-and-cellophane container, but is cheaper.

Expanding on this fact, Murray Biscuit Co., Augusta, Ga., uses a duplex bag of polymer-coated cellophane to give extra-long life to its line of bagged cookies.

Non-fogging

Since an increasing number of bakers are now turning to refrigeration and freezing to extend shelf life of their products and to even out production peaks, the non-fogging characteristic of two polymer-coated cellophanes are of particular importance.

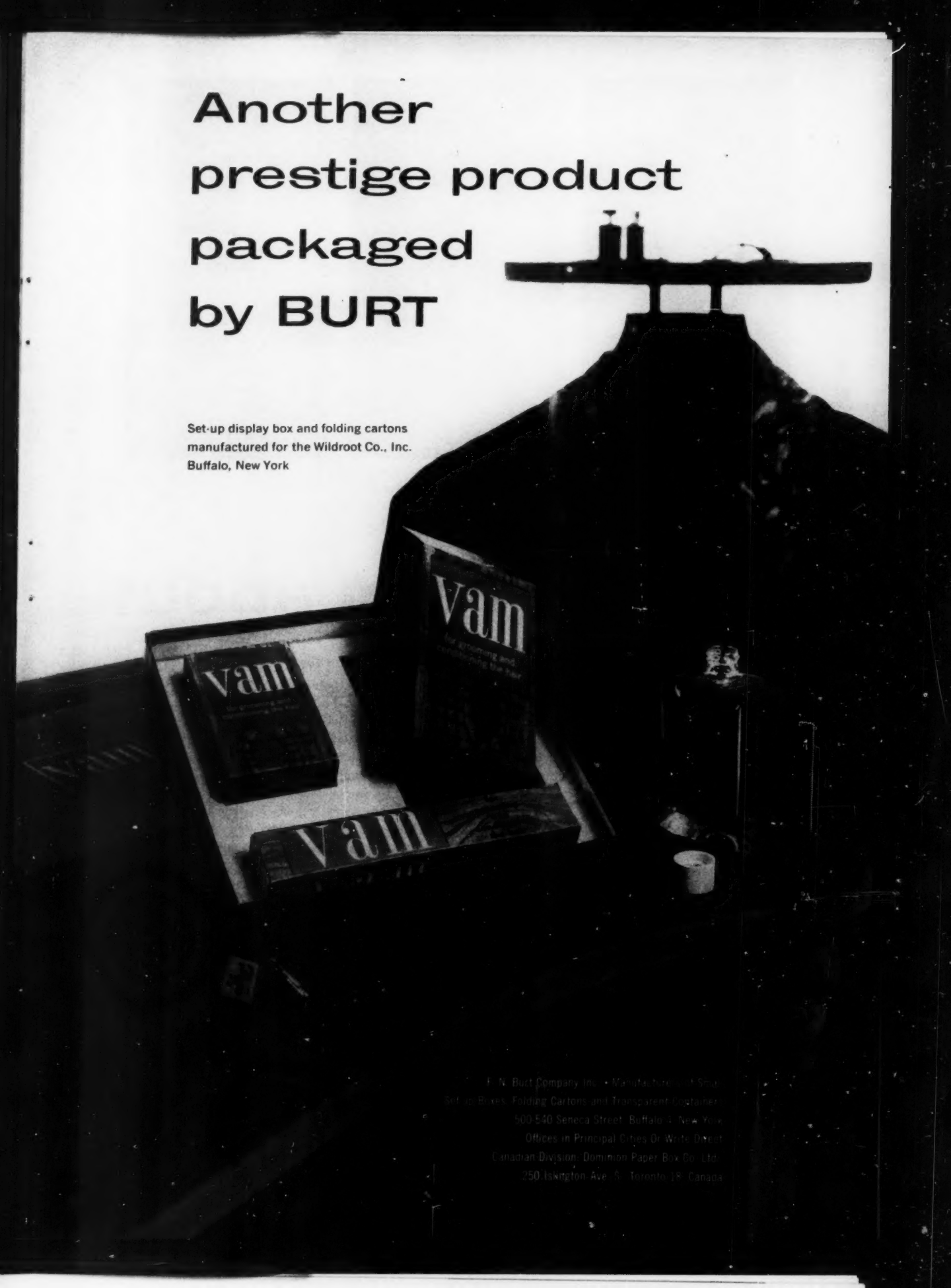
In addition to the examples already mentioned, Shull's Bakery, Inc., Marysville, Pa., particularly cites this property as contributing to better packaging appearance for its refrigerated lady fingers. An increased shelf life of 50% stems from the fact that the tough film practically eliminates cracking at package corners, a former problem for this company.

The potential for polymer-coated films in baked goods alone is tremendous. And use of these materials is expected to continue its present growth as more packers expand and feel the need for better shelf life and wider distribution range—factors that are amply increased by this film's strength, heat-sealability, non-fogging and barrier qualities.

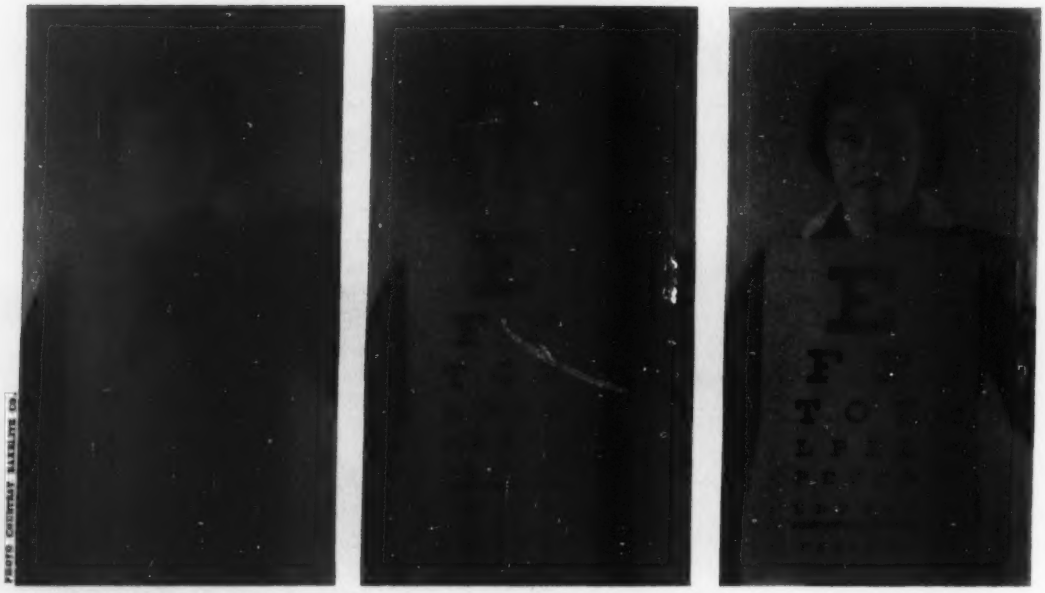
The trend is bound to spread to packaging of other fatty foods, too. Now used in a limited way for candies, the barrier properties and sparkling appearance of these films are of particular importance in safeguarding product freshness and stimulating sales. Nuts, cheeses and dates must also be protected from drying and the polymer-coated material may greatly influence transparent packaging of fried chips, a highly corrosive food product which contains large amounts of both salt and oil.

Another prestige product packaged by BURT

Set-up display box and folding cartons
manufactured for the Wildroot Co., Inc.
Buffalo, New York



F. N. Burt Company Inc. • Manufacturers of Set-up Boxes, Folding Cartons and Transparent Containers
500-540 Seneca Street, Buffalo 1, New York
Offices in Principal Cities Or Write Direct
Canadian Division: Dominion Paper Box Co. Ltd.
250 Islington Ave. S., Toronto 18, Canada



Striking increase in clarity of polyethylene over the past few years is dramatized by these three photos. Cloudy film (left) was made prior to 1954. Intermediate product was available between 1954 and 1956. New improvements in basic resins and extruding techniques are reflected in the extra-clear material (right) now on the market.

What about

The biggest unsolved problem in packaging today is the failure of machine development to keep pace with the progress of plastic films. In recent months polyethylene has displaced cellophane as the lowest-priced, heat-sealable transparent film. Today polyethylene film costs 9 cents less per pound than cellophane. Thus there is suddenly intensified interest in the use of polyethylene not only in bag making, where it is already well established despite machine problems, but in the enormously larger field of heat-seal-overwrap applications, where it has made no headway at all. Packagers who would like to turn to the lower-priced film for overwrapping find themselves stopped by the almost total unavailability of overwrap machines that can handle a limp, clinging film at the high speeds which economical mass production demands.

In this second of a series of articles, we look into the problems of polyethylene itself and point out what is being and can be done to improve it for overwrap-machine handling. A third article, next month, will explore the work that is now under way to meet the problems head-on through new or modified machine design—a fundamental solution which might apply equally to other desirable plastic films now in limited use.

Given a useful film which by nature is difficult to handle on existing packaging machinery, there are obviously two approaches to a solution: improve the film, or improve the machinery.

The final answer in the case of polyethylene overwraps undoubtedly will come only by concerted effort along both roads. But for the moment, in this article, let us consider the nature of the film itself and what is being and can be done to suit it better for high-speed, heat-seal overwrapping.

Let it be said that polyethylene suppliers, generally, are trying. They have worked steadily over the past 10 years—and particularly hard during the last two—to strengthen the natural advantages of polyethylene and to correct some of its troublesome machine-handling characteristics.

The advantages of polyethylene as an overwrap film are exactly those that have made it an outstanding bag material:

1. Superior strength
2. Long life
3. Excellent texture, or feel
4. Wide temperature tolerance
5. Moistureproofness

The trouble spots include some of those which

have been overcome—or at least controlled—in bag making and others which are peculiar to overwraps:

1. Limpness
2. Problems in heat sealing
3. Difficulty of opening
4. Low clarity and gloss
5. Poor "slip"

Progress has not been easy. And there are some factors such as limpness, multiple-layer sealability and difficulty of opening that still need concentrated effort—possibly even a fresh approach better suited to the basic nature of a thermoplastic film. But in the main, materials suppliers have done a commendable job of increasing the clarity and sparkle of polyethylene, stiffening the film, giving it better slip properties and devising sealing techniques and opening devices to make polyethylene film acceptable for many uses.

High on the list of these improvements are gains in clarity and sparkle—merchandising qualities that have made cellophane the standard of heat-sealable, transparent packaging materials. While the polyethylene film commercially available today still does not match cellophane in these respects—to the critical eye of test instruments—it is now so close that experts say there is little choice to be made between the two different films from a practical merchandising standpoint.

In 1955 the best polyethylene film had 10 times the clarity of film made in the late 1940s and today good-quality polyethylene is twice as clear as the 1955 vintage, according to researchers at Bakelite Co. Du Pont scientists, who use a special "see-through" tester to measure clarity by comparison with a standard film sample, report that clarity of a typical polyethylene film produced in 1945 is 5%, while a new film introduced in 1955 achieves a clarity of 225%—far greater than the original standard against which it is judged.

But the great bulk of overwrapping applications does not demand *crystal* clarity. Clinging overwraps place the film in such close proximity to printed cartons or product that slight haziness passes unnoticed.

A much more important factor in merchandising appeal, say authorities, is gloss or surface sparkle.

Here, too, polyethylene has made great strides, particularly in the last two years. As can be seen in the accompanying graph, specular gloss of polyethylene has jumped from a low of 80 in 1945 to more than 140 today. And ever higher figures—up to 160—are predicted for new films just around the corner. These materials, when available, will approximate the sparkle of cellophane, which averages 170 but actually runs as low as 160 in some types.

In printability, too, polyethylene and cellophane have virtually the same quality today and most converters make no price distinction between the two films on this basis.

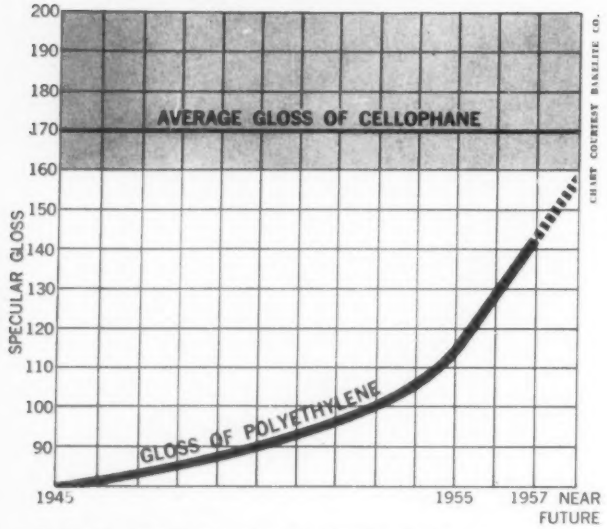
But, so far as overwraps are concerned, there is one point in converting that needs watching. Surface treatments to prepare polyethylene for printing can oxidize the surface of the film, changing the surface layer from a thermoplastic material to a thermosetting compound. This can raise the sealing temperature of the surface, a fact that causes little trouble in bag making, where the film is generally sealed back to back, but definitely can interfere with overwrap seals in instances where the material

SECOND OF A SERIES

polyethylene?

It now stands as the lowest-priced heat-sealable film, but still isn't ready for high-speed overwrapping. What are materials producers doing about this major problem?

POLYETHYLENE FILM GLOSS NEARS CELLOPHANE MINIMUM



A sharp upsurge in gloss of polyethylene film has occurred since 1955. Commercial film now rates over 140 on this testing scale. Imminent improvements in specular gloss —rated by most film experts as the most important merchandising quality of a transparent overwrap—should bring polyethylene very close to cellophane's minimum value (160).

is welded back to front. Development of other techniques for obtaining printable polyethylene surfaces is under way and needs to be pressed.

Basic advantages

If polyethylene's best prospect, however, was merely to imitate cellophane's properties, there would be little excitement about it. It is polyethylene's built-in qualities—texture, strength and long service life—that make it suddenly important as an overwrap candidate, now that divergent price trends have placed it substantially lower in cost than cellophane.

Possessing a warm, soft texture and giving an impression of durability, polyethylene film has a firm grip on consumer preference in many applications. In tests conducted on soft-goods packaging by Alfred Politz for Du Pont it was found that 94% of those who bought pre-packaged sweaters preferred this item in polyethylene. Almost as revealing were some of the reasons cited by the consumers for this choice: strength and durability of the package, 38%; keeps product clean, 35%; re-use value, 24%; feels better, 8%.

However, it takes more than softness to make a good overwrap. And it is the natural strength of polyethylene—its ability to withstand tremendous abuse in shipping and consumer handling—that makes this material really stand out. Elmendorf tear strength of polyethylene film—a vital statistic for either supported or unsupported overwraps—runs from 150 to 350 gms. per mil. Even more important, polyethylene is not notch sensitive.

Most important of all, polyethylene possesses infinitely long service life—being completely unaffected by long storage periods and wide variations in temperature and humidity. Under these adverse conditions it shows no drying, splitting, shrinkage or loss of strength.

While not so low as that of MS cellophane (0.2 to 1.0 gm.) the water-vapor transmission rate for standard polyethylene (1.2 gms.) is adequate for a wide range of overwrap applications, such as soft and hard goods and even many foods for which moisture transmission is controlled by the unit package. And under actual use conditions, where folding and abrasion enter the picture, there is actually little difference in moistureproofness between cellophane and polyethylene. The new high-density polyethylene films promise to provide the added flavor, grease and moisture barriers required by specially sensitive products.

The heat-sealing problem

With all these present values—and still more to come soon—why hasn't polyethylene film been an important overwrap material up to now?

The biggest stumbling block to widespread use of this material has been the problem of heat sealing. For polyethylene is a completely thermoplastic material. Cellophane is not a plastic at all, but a regenerated cellulose, akin to the paper materials for which present overwrapping machinery was designed 40 or 50 years ago. Here are the problems created by this situation.

With cellophane, sealing heat is driven through the non-thermoplastic base film to melt and weld the thermoplastic coating and thus form a bond.

Throughout this conventional process, the base film remains intact—with tensile strength unaffected by the heat. But with polyethylene, the entire film is critically meltable. This presents only minor problems when two thicknesses—or even four layers—are quickly welded together, but creates a host of difficulties when the multiple thicknesses found in overwrap folds must be firmly sealed. Here, in order to get a seal, heat must be driven through all of the thicknesses and the resin itself actually melted. At this critical point, tensile strength of the film drops almost to zero. If any stress is put on the material, it pulls apart. This problem has bothered polyethylene bag makers in the past and even today

running speeds on these lines are slower than with non-thermoplastic packaging materials.

Also, in the molten state, polyethylene is very sticky and tends to adhere to sealers or any other metal part with which it comes in contact.

Since these are basic properties of any thermoplastic film, there is little hope of changing them by reformulation of the film resins. So far, these problems have had to be worked out from the machine-handling angle.

Are there any alternatives to heat sealing? Research by major resin suppliers points to two possibilities: adhesives and coatings.

Little progress has been made with adhesives, because of the intricate machine problems posed by multi-layer seals. However, there is some work being done in this area.

There is hope for heat-sealable coatings that would melt below the softening point of polyethylene. It was just such coatings that originally put both paper and cellophane in the heat-sealed-overwrap business. But the point that has balked polyethylene researchers is that this film has such a low softening point (about 230 deg. F.) that possible coatings with a lower melting point are practically non-existent and are very difficult to formulate. And the cost of coating the film at this time might destroy the price advantage held by polyethylene. Also, coatings would not give the complete moisture and gas barrier inherent in a good heat seal.

The opening problem

Greater effort probably will be applied to coatings, for a solution here would not only solve the sealing problem, but might afford the best answer to a second practical problem with the polyethylene wrap: How to get the package open once it *is* sealed.

Because of the film's great strength, a fully welded polyethylene seal is virtually impossible to pull apart and the film itself is likewise difficult to tear. Since ease of opening is a virtual must in consumer packages today, this problem assumes large proportions.

The importance of this point has not escaped at least one of the resin producers. Bakelite Co. has been working on both tear-tape and perforated-film opening devices. Two other methods—peelable seals and bead sealing—are still in an inconclusive stage of development.

The most likely answer at this time appears to be a tear tape. Until recently, however, success of this method looked doubtful, because there are few practical materials that can tear through this tough film. A host of tapes have been tried: fine wire, plastic-coated glass fibre, silk thread and both high-density and irradiated polyethylene, to name a few.

Recent tests by Bakelite have done a great deal to shed light on just what is necessary to make a tear tape effective for polyethylene.

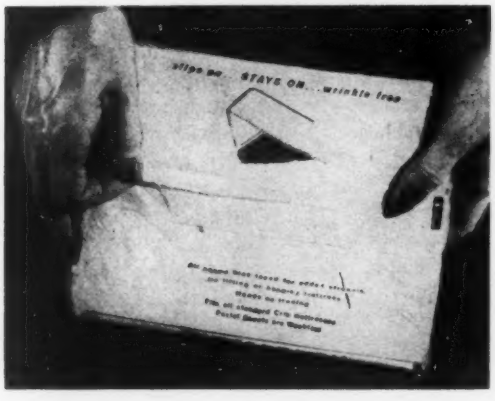
The prime objective is to prevent stretch—a normal occurrence when this film is placed under tension. This can be accomplished by creating an "edge effect"—a straight line along the tape on which the film will tear when the tape is pulled.

An example of this effect is the sealed edge of a polyethylene bag. The film will preferentially tear along this seal. In fact, its willingness to do this was one of the original problems that had to be solved before polyethylene pouches and bags could

PHOTO COURTESY BRITISH CELLOPHANE

Heavy objects, such as hardware products and garden supplies, are given full protection by this tough material. From England comes this example of a garden hose, overwrapped with two sheets of polyethylene film and heat sealed on an ingenious semi-automatic machine designed by the packager, Plasticised Expanding Wire Products, Ltd., Slough, Bucks. Coiled hose rests on a circular base plate between two sheets of film. A tightening ring clamps the film and a combined sealer and cutter operates around the base of the circumference to close the package and to trim off excess film.

One of the few existing applications of a fully mechanized polyethylene overwrap is this crib sheet, packaged by Stayon Products, Inc., Greenville, S. C. Strength of film and its heat seal give the long shelf life needed for soft goods.



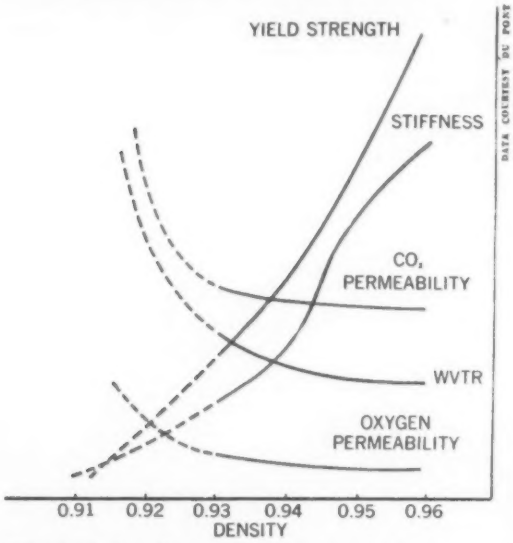
be made practical from a commercial standpoint.

Advantage is taken of this property, however, in the case of the tear tape and the edge effect has been created in one of three ways: By extruding beads of polyethylene on the film, by heat sealing a strip of material to the polyethylene, or by actually imbedding a tape or thread in the film under heat and pressure.

Extruded polyethylene beads, in which two bands form the edge effect and the third and central bead actually is the tape, have been successful in the laboratory. But problems of application at the wrapping machine have not yet been worked out.

Heat-sealed and imbedded tapes employing such common materials as polyethylene-coated kraft paper, gummed tape, cotton thread and cloth appear commercially practical, however. And at least one large food company is now market testing a dehydrated product in a laminated pouch (made with more than 1 mil of polyethylene) which will be opened in this manner.

HIGHER DENSITY IMPROVES POLYETHYLENE—FILM PROPERTIES



Effect of density on polyethylene is graphically shown in this composite of five property charts. Note that strength and stiffness soar with increased density, while gas and moisture permeability decrease markedly. Solid lines start at density of 0.930 because many experts agree that only polyethylene films of this value are most suitable for overwraps. (Curve for each property shows relative changes *in* that property; there is no comparison intended *between* curves, as scales of measurement for these characteristics differ.)

Any commercial heat sealer can be used to seal a tear tape, the only requirement being that the sealing plate be $\frac{1}{32}$ to $\frac{1}{16}$ in. wider than the tape. In the sealing process, temperature and pressure weaken the film along the tape to the point where durability of the package is still sufficient, but the force required to tear along the tape is less than the tear resistance of the film.

Another technique that makes a successful opener is to imbed a thread in the film with a heat sealer. In this process the thread actually cuts the film and adheres to it. A strip of adhesive-backed tape is then applied over the thread to hold the film together. The thread is pulled to cut the tape strip and thus open the package.

Even with these tricks, however, strong materials must be used for the tapes.

Though the spotlight has been most recently on tear tapes, perforated films also show promise for certain applications. Here the film is pre-cut, then merely torn along the "dotted line" by the consumer. Perforation can be varied in its place of application to give reclosable packages, or it can be used on overwraps to remove the entire end seal. Polyethylene is so strong that the slight weakness introduced by properly placed perforations has no marked effect on the over-all strength of the overwrap. This method, of course, does not give a completely tight package.

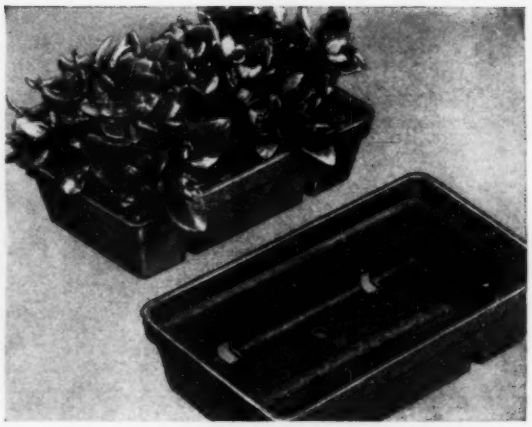
In the area of other possible opening methods, a great deal of research effort has been spent on polyethylene-to-polyethylene peelable seals, though some experts close to the current research doubt that this method of closure will be the ultimate answer to the sealing problem. For even when the sealing temperature is reduced to the point where the film is only lightly stuck together, the inherent strength of polyethylene still makes the package harder to open than is the case with waxed paper or cellophane.

But there are still great opportunities in this area. Polyethylene film today is a resin with a relatively narrow sealing range. But it may be possible, according to resin experts in the field, to formulate the film with a combination of polymers with markedly different melting points. With this mixture, some of the resins melt, giving a tack-type seal. Research is going forward on this idea now.

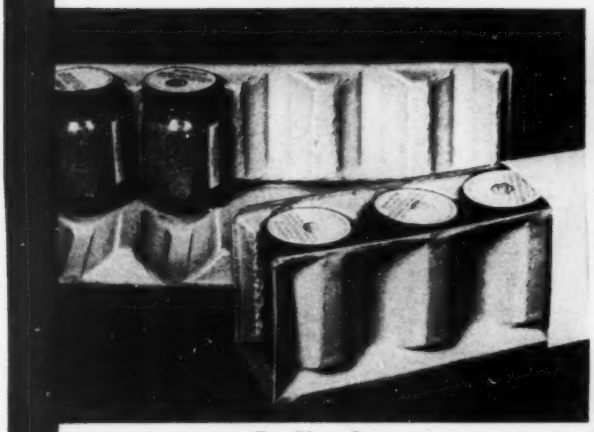
Bead sealing, where a molten stream of polyethylene is extruded between the folds or seams of the film and then compressed, does give a peelable seal and therefore is a strong contender as an easy opener for overwraps.* So far, this technique has been worked out in the laboratory and gives good results. Some [*Continued on page 200*]

*See "The Molten Bead Sealer," MODERN PACKAGING, Dec., 1956, p. 153.

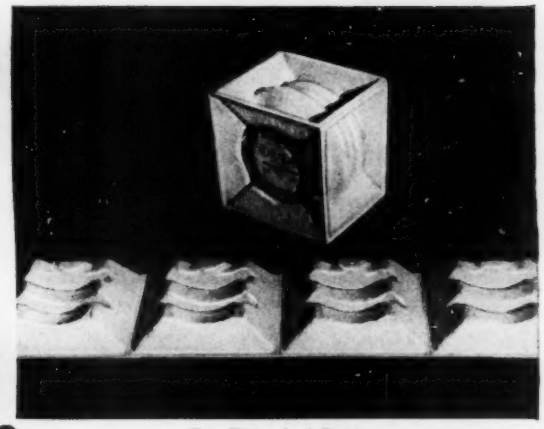
For Fruits



For Plants



For Glass Jars



For Electrical Parts

Keyes molded pulp *Contour* packaging

★ **Custom fitted protection**
★ **Less bulk**
★ **Lower cost**

Modern contour packaging with molded pulp is being increasingly recognized as the most effective method of protecting a wide variety of items. The most delicate merchandise can be shipped with greater safety when shielded by these form-fitting pulp shapes. In addition to savings from reduced breakage, nested contour packaging material is well suited to modern automation, saves valuable storage and shipping space and is usually less costly.

Years of experience in the field of molded pulp coupled with modern plants and manufacturing skills, are available at Keyes to design and produce a more efficient, more economical packing for your products. Our Product Development Division will be glad to supply further information and cooperate with you in developing contour packaging for your products.

Product Development Division, Dept. 42

KEYES FIBRE COMPANY **WATERVILLE, MAINE**

New *Tri-Sure*® Clinch-on Nozzle

Trade Mark

Now PAIL FILLERS can install *Tri-Sure*® assemblies after filling

More than 24 variations applicable to ONE standard opening

Tri-Sure Reversible Spout Assemblies
Tri-Sure Threaded Spout Assemblies
Tri-Sure Tru-Pour Collapsible Spout Assemblies
Tri-Sure Push-Pull Spout Assemblies

Tri-Sure* Pail Closure Assemblies are now designed with nozzles having clinching rims that fit one standard opening—so that the filler can equip a pail with any one of more than 24 different variations of assemblies.

Pails are delivered to the filler with the opening formed and covered with a dust cap. After filling the pail, the Tri-Sure Assembly is just clinched to the neck of the opening. This is a simple, fast operation.

This new Tri-Sure Clinch-on† Nozzle gives the *filler* a simple, easy way to *select* and install the *correct closure for every product* and pouring problem. And it gives the user the closure *he* wants!

Let this revolutionary new Tri-Sure Clinch-on Nozzle solve your pail closure problem permanently—with an appreciable saving. Send now for folder giving full details on the complete line of Tri-Sure Clinch-on assemblies. Then specify the Tri-Sure Clinch-on opening to your pail supplier. Order the assembly best suited for your product direct from us.

**The Tri-Sure Trademark is a mark of reliability backed by over 35 years serving industry.*

†Patents Pending.

Always specify **Tri-Sure** CLOSURES

AMERICAN FLANGE & MANUFACTURING CO. INC.
30 ROCKEFELLER PLAZA, NEW YORK 20, N. Y.
CHICAGO, ILL. · LINDEN, N. J. · NILES, OHIO

TRI-SURE THE WORLD OVER

Tri-Sure Products Limited, St. Catharines, Ontario, Canada
Tri-Sure S/A Indústria e Comércio, Sao Paulo, Brazil
American Flange & Manufacturing Co. Inc., Villawood, N. S. W., Australia
Compañia Mexicana Tri-Sure S/A, Naucalpan, E. de México, México
B. Van Leer N. V., Stadhouderskade 6, Amsterdam, Holland
Van Leer Industries, Ltd., Seymour House, 17 Waterloo Place, Pall Mall S. W. 1, London, England

Copyright 1957, American Flange & Manufacturing Co. Inc.

Technical Editor
Charles A. Southwick Jr.

Polyethylene-wax coatings

A study of the functions of low-density polyethylene resins used as wax modifiers to meet specialized requirements in paper coatings

By G. S. Peacock, W. H. McKnight* and J. M. Austin†*

The use of petroleum waxes in conjunction with paper products has increased tremendously in the past two decades. Rumberger (1, 2)[1] has described the history and development of the petroleum-wax industry and its effect on the paper converter. Subsequent changes in packaging practice, however, have brought about specialized physical-property requirements that are not completely met by papers coated solely with petroleum waxes. Thus, the use of additives to modify the base petroleum waxes and better satisfy coating requirements has long been practiced. Such procedures have recently been surveyed by Vaurio and Howells (3, 4).

Of particular interest, from a wax-modification standpoint, are the ethylene polymers, which exhibit structural and chemical similarity to the paraffin waxes, and the promise of improved film properties resulting from such modification. Patton (5) has outlined many of the properties of polyethylene resins used in the coatings industry and has mentioned applications of the polymers. Because of the variety of coating practices and end-use requirements, the authors have attempted to classify, in general terms, the suitability of several polyethylene resins for two types of hot-melt paper-coating techniques. These practices as defined are:

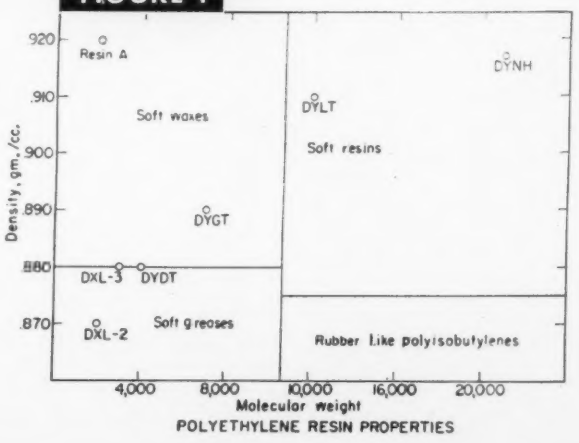
1. Processes that utilize relatively low wax-bath temperatures (< 190 deg. F.) for coating and a slow rate of cooling of the coated wax film, usually in air. One example of this type of operation is the paper carton dip-coating operation.

2. Methods that use wax-bath temperatures as high as 212 deg. F. and that employ some technique of quickly chilling the wax film. A prime example of this type of operation is the high-speed hot-melt coating of bread-wrap stock and similar papers.

To obtain a more complete performance picture of polyethylene-modified paraffin waxes, studies were carried out on cloud points, viscosities and tensile strengths of the base coating, in addition to physical properties of paper coated with the polyethylene/wax blends. Cloud point and viscosity properties of the hot melt permit a rough but quick estimate of the suitability of a resin for the mechanics of a particular coating operation. Tensile strengths of unsupported cooled specimens, measured as modulus of rupture, indicate the value of a modifier in terms of increased strength imparted by the modifying resin.

Improved physical properties of coated paper are important objectives of individual converters and of

FIGURE 1



POLYETHYLENE RESIN PROPERTIES

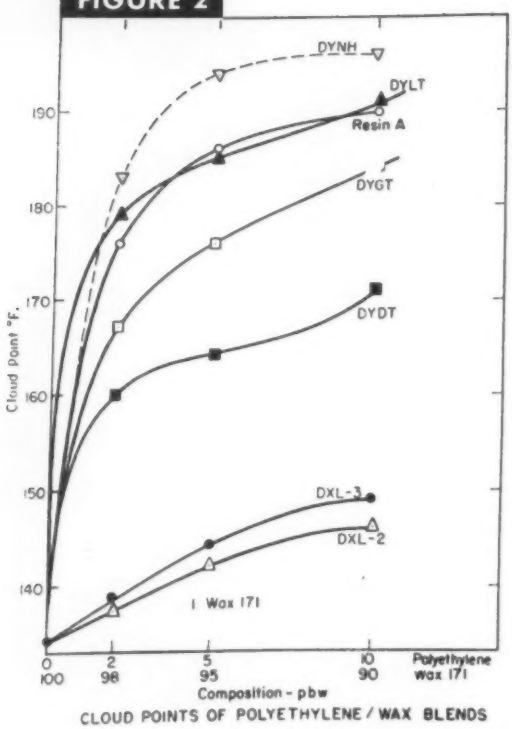
* Bakelite Fellowship, Mellon Institute of Industrial Research, Pittsburgh, Pa.

† Development Dept., Bakelite Co., Div. of Union Carbide Corp., Bound Brook, N. J.

From a paper presented before the 11th Plastics-Paper Conference of the Technical Assn. of the Pulp & Paper Industry. Published in the May, 1957, issue of TAPPI. Reprinted by permission.

[1] Numbers in parenthesis identify References appended.

FIGURE 2



CLOUD POINTS OF POLYETHYLENE / WAX BLENDS

over-all packaging research. Range-finding studies by the authors in this field showed encouraging properties for polyethylene-modified wax-coated papers.

Properties

Cloud point. As a molten homogeneous mixture of polyethylene and paraffin wax slowly cools, polyethylene, with its higher melting point, separates as a solid phase. The temperature at which phase separation occurs is termed the "cloud point" of the mixture and may be considerably higher than the freezing point of the paraffin-wax base. Because of the existence of a two-phase system, physical properties of final coating will depend to a considerable extent on the rate of cooling of the heterogeneous melt through this temperature range (between the cloud point of the mixture and the melting point of the paraffin-wax base). Cloud point is especially important in the paper-carton-type, low-temperature coating operation. For this process, coating temperatures generally fall between 160 and 180 deg. F., which is also the cloud-point range of most polyethylene-wax mixtures.

Viscosity. A knowledge of viscosities of melts used in high-speed hot-melt waxing equipment is very important because machine adjustments that regulate wax weight pick-up, film thickness and continuity are directly dependent on melt viscosity. Also, these viscosities are closely related to the economics of various coating systems. For instance, in dip coating of paper cartons, two opinions are promulgated with regard to economics. Some favor a low-melt viscosity in order to promote maximum wax penetration and others rely on less melt consumption and reduced penetration with a tougher, more elastic surface film.

Tensile strengths; modulus-of-rupture tests. Although unmodified paraffin waxes impart good waterproofing properties to paper, they are too brittle for many packaging requirements. An indication of the increased strength of polyethylene/wax blends due to the addition of polyethylene can be obtained from tensile strengths, measured as *moduli of rupture.* Flexibility also is imparted by the polyethylene additive and is reflected in much higher moduli-of-rupture values of the polyethylene-modified samples. Increased strength and flexibility aid in the retention of coating continuity during handling and creasing, thus providing better protection against product deterioration. Polyethylene additives prevent blocking if used properly.

Other properties. Gloss, heat-seal-strength, block-point, water-vapor-transmission and grease-resist-

Table I: Wax physical properties

	Paraffin wax			*Microcrystalline wax*			
	171[1]	*54-1395*[2]	*1230*[3]	*191*[1]	*Cit-con 200*[4]	*Amprol 23*[5]	*Superflex S 100*[6]
M.P. °F. (AMP)	134	128/130	—	139	—	175	148/152
M.P. °F (ASTM)	—	—	131.5	—	137.8	—	—
Oil, % (ASTM)	0.5	—	0.4	0.4	0.23	1.0	>1.0
Modulus of rupture, psi at 70° F.—Instron	466	373	—	336	—	—	—
Viscosity, Kinematic at 210° F., cks	3.61	3.58	3.91	3.51	—	14.2	—
Viscosity, S.U.S.	38.2	38.1	39.1	37.9	—	74.9	—

[1]Atlantic Refining Co.
[2]Esso Standard Oil Co.
[3]The Texas Co.
[4]Cities Service—Continental Oil Co.
[5]Quaker State Refining Co.

ance properties all are important measures of a coating's suitability. To narrow the limits of initial testing, gloss and water-vapor-transmission tests were chosen as measures of effectiveness, because of their importance to consumer-product packaging.

Materials

Polyethylene. Five commercially available polyethylene resins and two experimental resins, DXL-2 and DXL-3, were used in this study. Figure 1 shows weight-average molecular weight plotted versus density for these resins, along with their physical-hardness relationship. All the resins except Bakelite resin DYNH are low-molecular-weight polymers.

Waxes. Physical properties of the paraffin and microcrystalline grades of waxes used in these tests are shown in Table I. They are believed to be representative of waxes commercially available.

Procedures

Cloud point. Polyethylene/wax hot melts were prepared at 240 deg. F. by dissolving the polymer in molten wax under agitation. To measure cloud point, portions of the melts were transferred to preheated 25-by-200-mm. test tubes. A Tyndall beam was passed through the lower portion of the ¾-full test tube. While cooling, the blend was stirred continuously with a mercury thermometer and the entire apparatus was viewed against a dull black background so that the formation of a separate phase (cloud) would be immediately evident.

Table II: Effect of paraffin wax on cloud point
(Cloud point, °F.)

Wax	*171*	*54-1395*	*1230*	*191*
Bakelite resin				
2% DYDT	160	160	158	157
5% DYDT	164	164	164	164
10% DYDT	171	172	174	173

Viscosity. Viscosities were determined with a Cannon-Fenske type of viscometer immersed in a bath held at 210 deg. F.

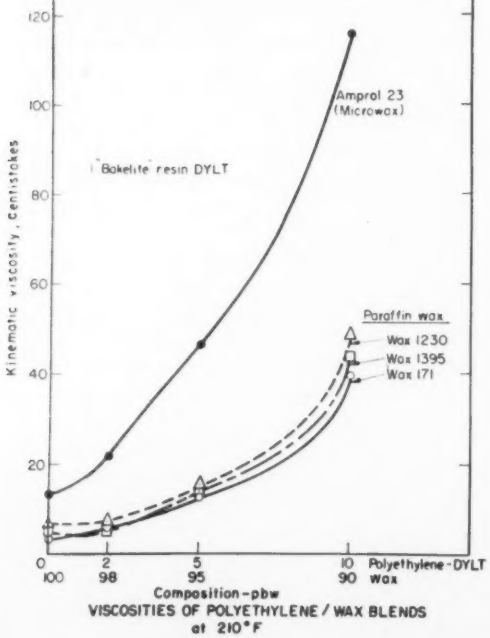
Modulus of rupture. Rupture tests were conducted according to a method described in TAPPI, Vol. 33, No. 7, July, 1950, with the exception that an Instron tester was used as the rupture device. Values determined graphically were substituted as follows:

$$MR = \frac{2}{3}\,\frac{PL}{bt^2}$$

MR = Modulus of rupture in psi
P = Breaking weight in pounds
L = Span of sample supporting bars in inches
b = Sample width in inches
t = Sample thickness in inches

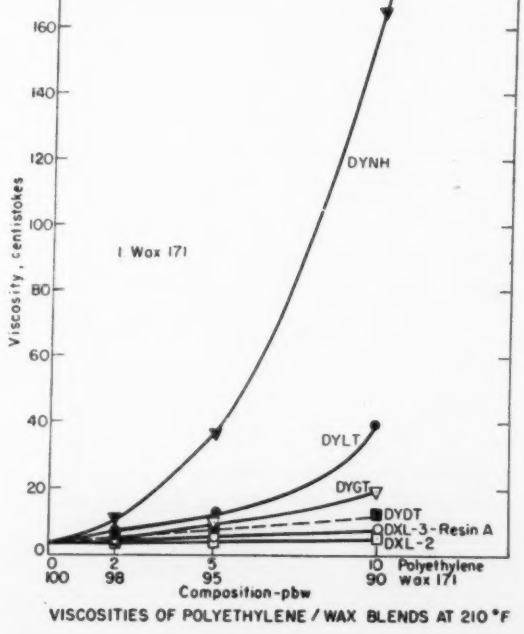
The rate of sample loading was 0.5 in. per minute, while the chart speed was 2 in. per minute, giving a strain-magnification ratio of four to one. Sample span was 2 in. It should be pointed out that the moduli-of-rupture data points show wide variations

FIGURE 3

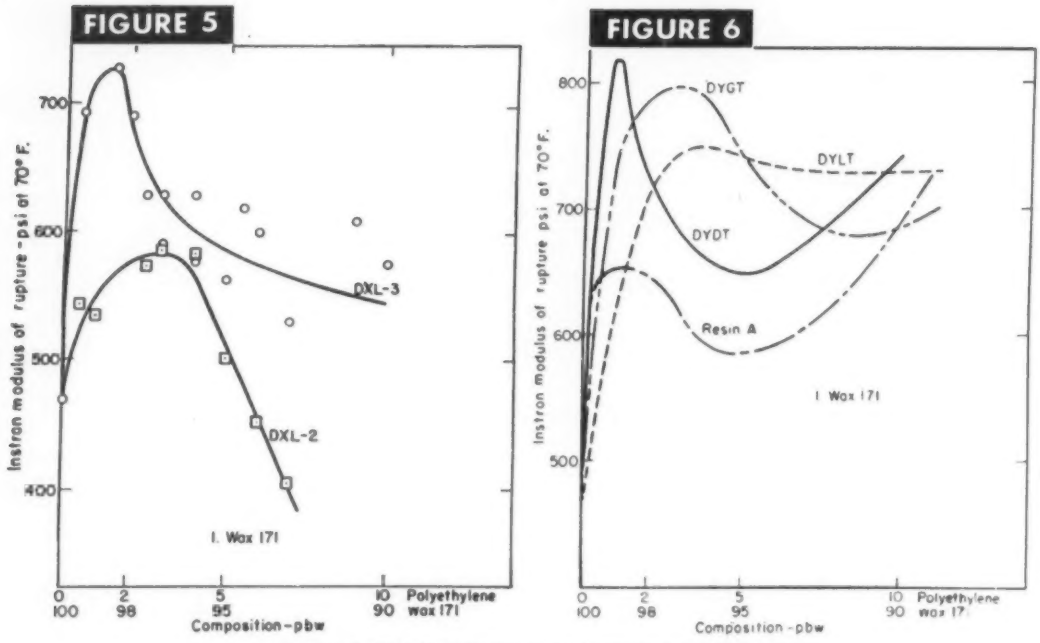


VISCOSITIES OF POLYETHYLENE / WAX BLENDS at 210°F

FIGURE 4



VISCOSITIES OF POLYETHYLENE / WAX BLENDS AT 210°F



MODULI OF RUPTURE OF POLYETHYLENE / PARAFFIN WAX BLENDS

(see Figure 5). The curves represent a statistical approach to best define strength as a function of polyethylene content.

Gloss. Gloss was measured according to TAPPI Standard T-480-M-51, Specular Gloss of Paper at 75 deg. F., with a Gardner glossmeter (Gardner Laboratories, Inc., Bethesda, Md). Before measurement, the paper was conditioned 24 hrs. at 70 deg. F. and 50% relative humidity.

Water-vapor transmission. The method TAPPI Standard T-464-M-45, Water-Vapor Permeability of Sheet Materials at High Temperature and Humidity, was followed to determine moisture transfer, with the exception that a 70-deg.-F. testing temperature was used. Creased samples for these tests were prepared according to the method TAPPI Standard T-456 sm-52, Creasing of Paper for Water-Vapor Permeability Tests. In these tests, Side 1 refers to the exposed surface of the finished package. Side 2 refers to the reverse surface.

Preparation of coated samples. An opaque 25-lb. sulphite paper was used for preparing coated samples. This paper was represented as being a typical bread-wrapper paper with a starch coating on one side and a latex coating on the other. It was supplied by Consolidated Water Power & Paper Co., Wisconsin Rapids, Wis. The paper was coated in a laboratory-size waxing machine, which utilized a steam-heated doctor-bar system to wipe off excess wax. The coated paper was chilled by dipping it into a cold-water bath. Coated-paper samples were stored for 24 hrs. at 70 deg. F. and 50% relative humidity before testing. The following formulations were used to prepare the coated samples:

Composition—(Parts by weight)

	Test formulation	*Control formulation*
Cit-con 200	67	70
Superflex S 100	30	30
Polyethylene	3	—
	100	100

Results

Effect of paraffin wax on cloud point. Cloud point of polyethylene-modified paraffin waxes appears to be practically independent of the paraffin-wax base used. Table II shows cloud points for four representative paraffin waxes modified by 2, 5 and 10% concentrations of Bakelite resin DYDT. The data show a maximum cloud-point spread of 3 deg. F. for the waxes tested. It was found that this test is very reproducible and that for one wax, one resin and more than one operator, cloud points ± 1 deg. F. are readily duplicated.

Effect of polyethylene on cloud point. Wax 171 was modified with varying amounts of polyethylene up to 10% resin content by weight. Figure 2 shows cloud point plotted versus blend composition. Cloud points of blends containing even minor amounts of polyethylene are considerably higher than the base-wax melting point. Above 2% polyethylene concentration, the rise in cloud point with increased resin content is not so pronounced. That cloud point is a function of density and molecular weight is ably

shown by the relationship between cloud point and molecular weight of the standard Bakelite resins, where increased density is associated with increased molecular weight. It is interesting to note that Resin A, with a density higher than that of many resins tested (0.92) and a molecular weight comparable to that of Bakelite resin DXL-2, shows cloud points comparable to Bakelite resin DYLT. This would indicate that density is the more important factor.

It should be added that visual cloud points of polyethylene/microcrystalline wax (amber) blends could not be determined because of the darker color of the melts.

Thus, the cloud-point curves of the resins tested show that low-density resins would be most suitable for a carton-coating operation which uses coating temperatures in the range of 160 to 180 deg. F. Use of the higher density resins under these conditions must be at resin concentrations under 2%.

Effect of petroleum waxes on viscosity. Viscosities of Bakelite resin DYLT-fortified paraffin and microcrystalline wax blends showed that small variations in viscosity are observed at the same polyethylene content with variation in the base paraffin wax. Figure 3 shows viscosity/composition curves for these mixtures. Similar results would be expected on addition of this resin to microcrystalline waxes of approximately the same unmodified wax viscosities. The microcrystalline-wax/polyethylene-blend viscosity curve shows that viscosity of these blends is partly dependent on unmodified-wax viscosity.

Effect of polyethylene on viscosity. Polyethylene influence on viscosity is primarily a function of polymer molecular weight and concentration. Viscosity/composition curves are plotted in Figure 4 using paraffin wax 171 as the base wax. The graph shows relatively small differences in viscosity at low (less than 3%) resin concentration, but these are generally greater than that of the base wax. At the higher resin concentrations, viscosity differences between polymers are more pronounced. Increases in viscosity, within limits, can be tolerated for most coating systems. When objectionable, however, formulation changes provide a measure of viscosity control, as does variation in blend temperature.

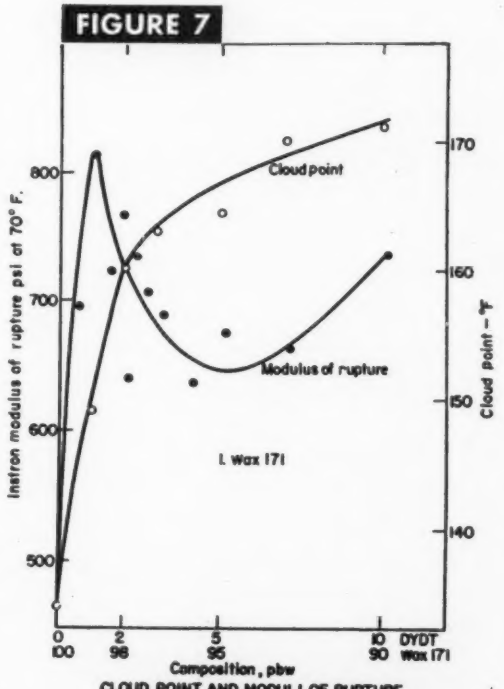
Tensile strength; modulus of rupture. The modulus-of-rupture test shows that polyethylene/wax-blend strength increases depending on the type and amounts of polymer used. The very soft and almost grease-like Bakelite DXL-2 and DXL-3 resins show rather surprising wax-reinforcement properties. Plots of rupture versus blend composition are shown in Figure 5. In spite of the softness of these resins, rupture values of wax blends containing 0.5 to 4% of these low-density polymers were considerably higher than rupture values of the unmodified wax. Strengths of Bakelite resin DXL-3-modified blends were considerably higher than those of Bakelite resin DXL-2-paraffin-wax blends. However, as resin contents increase above this maximum rupture-value range, the synergistic strength effect shows a continuous decrease. This type of behavior was not evident for blends modified by other resins.

Rupture/composition curves for blends modified by Resin A and Bakelite resins DYDT, DYGT and DYLT are plotted in Figure 6. These curves show rather sharp increases in rupture values, in comparison with that of the unmodified wax, in the 0.5 to 3% resin-content range. Generally, rupture values dropped to a slightly lower level in the 4 to 8% resin-content range. However, the moduli of rupture at 10% resin concentrations would indicate that above this concentration range, strengths generally increase with increasing resin content.

Figure 7 shows combined cloud-point and rupture variations for Bakelite resin DYDT wax blends. When polyethylene is used with coating methods where low cloud point is a prime criterion, the advantages of using a low resin content are that low cloud point and high strength can be attained.

Gloss. Table III shows waxing conditions, coating weights and gloss values for the samples tested. Gloss of the control sample was slightly better, in most cases, than that of the polymer-modified samples. However, such coatings lose gloss very easily. Addition of a polyethylene resin, then, aided more in

FIGURE 7



CLOUD POINT AND MODULI OF RUPTURE OF DYDT / PARAFFIN WAX BLENDS

Table III: Gloss of waxed papers
Specular gloss of paper @ 75°F., TAPPI Standard T-480 m-51

Sample	Side[1]	Wax bath[2] temp. °F.	Ctg. wt., lbs./ream	Maximum gloss	Minimum gloss	Average gloss
Unwaxed paper	I	—	25[3]	13	10	12
	II	—		5	4	5
Control formulation	I	180	11.2	95	74	86
	II			68	60	65
Test formulation[4] Bakelite resins						
DYDT	I	190	11.2	83	70	77
	II			84	63	71
DYGT	I	200	10.1	85	64	77
	II			69	46	62
DYLT	I	200	11.6	85	77	82
	II			72	64	68
DYNH	I	210	16.4	91	88	90
	II			84	76	79

[1]Side I is latex-coated side of unwaxed paper. This would ordinarily be on the outside of the package.
[2]Wax-bath temperatures, while above the cloud point of the polyethylene/wax blend, were held as close to the cloud point as possible. The different wax-bath temperatures also were selected on the basis of the different coating conditions required by the different polyethylene-resin modifiers. Chill bath temperatures were maintained at 40°F. for all tests.
[3]Unwaxed paper weight.
[4]The various polymers each were tested separately in the test formation.

Table IV: Water-vapor permeability of waxed papers (g./100 in.²/24 hrs. at 70°F.)[1]

Sample	Creased Side I[2] to 5% RH	Creased Side I to 95% RH	Uncreased Side I 5% RH to	Uncreased Side I to 95% RH	Ctg. wt., lb./ream
Control formulation	4.96	4.12	0.28	0.25	11.2
Test formulation Bakelite resins					
DYDT	2.85	2.21	0.35	0.24	11.2
DYGT	2.92	3.53	0.44	0.27	10.1
DYLT	3.62	3.55	0.34	0.24	11.6
DYNH	3.62	3.89	0.37	0.20	16.4

[1]Average of three determinations.
[2]Side I refers to exposed side of finished package.

gloss retention than in promoting gloss increases at these low resin concentrations in this test series.

Water-vapor permeability. Perhaps the most significant value in the water-vapor-permeability tests is that obtained by the sample which was creased and placed on test with Side 1 facing 95% relative humidity. This physical arrangement would probably be more nearly representative of a coated paper in service. Results of this series are shown in Table IV. Water-vapor-permeability resistance of polyethylene-modified creased papers was better than the control in all cases. Resistance of the uncreased samples showed that Side 1, exposed to 95% relative humidity, was slightly better than that of the control. Permeability resistance of samples in reverse position was poorer than that of the control.

Summary

Addition of polyethylene resins to petroleum waxes used for paper coatings permits the paper converter to produce products better suited to the large variety of today's packaging requirements.

A general classification of the major types of coating methods shows a need for polyethylene additives that do not undergo phase separation (cloud point) in the 160 to 190 deg. F. range. Cloud points of paraffin-wax/polyethylene blends were found to be primarily a function of resin density, molecular weight and concentration, and apparently independent of the base wax. Viscosity, however, was found to be a direct function of base-wax viscosity, resin molecular weight and concentration.

Very soft, low-density polyethylenes combined with paraffin wax showed tensile strengths greater than either alone. Maximum strength values appeared in the 0.5 to 4% resin-concentration range. As resin content increased, this effect disappeared. Harder, higher-density resins showed high strengths in the 0.5 to 3% resin-content range also. Generally, strengths were somewhat lower in the 3 to 8% resin-content range, but increasing strength at higher than 10% polyethylene content was noticed.

Gloss of hot-melt wax-coated and chill-cooled paper appears to be primarily a function of coating technique for the low-polyethylene-content formulations studied. Polyethylene addition to this type of coating appears to aid in gloss retention.

Water-vapor-permeability studies of coated papers showed lower permeability rates where the polyethylene-modified coatings were creased, indicating more strength and flexibility due to the polymer.

References

1. Rumberger, G. G., "Petroleum Waxes," Part I, *Paper, Film and Foil Converter, 29,* 6, 23 (1955).
2. Rumberger, G. G., "Petroleum Waxes," Part II, *Paper, Film and Foil Converter, 29,* 7, 21 (1955).
3. Vaurio, F. V. E., and Howells, T. A., "Wax Additives for Packaging," Part I, *Paper, Film and Foil Converter, 30,* 1, 24 (1956).
4. Vaurio, F. V. E., and Howells, T. A., "Wax Additives for Packaging," Part II, *Paper, Film and Foil Converter, 30,* 2, 17 (1956).
5. Patton, C. W., "Polyethylene Coating on Paper," *Paper, Film and Foil Converter, 28,* 1, 17 (1954).

This packaging expert puts products in motion...

Olin Cellophane Specialists help speed Production, Distribution and Sales

Did you know that in the past year alone, Olin added five new cellophane types to its product line? That production speeds up to 21,000 cellophane packages an hour are now attainable? That packaging costs for many products can now be cut in half? Let Olin Cellophane research, technical and merchandising staffs show you how to use modern cellophane to improve your products, new and old. This unique packaging service in depth was specifically organized to help you find new methods to speed product movement from your plant to store to consumer—at lower cost and higher profit.

Call in an Olin Cellophane packaging consultant today, or write Film Division, 655 Madison Ave., New York 21, N. Y.
Olin Mathieson Chemical Corporation

A Packaging Decision
Can Change the Course of a Business

OLIN MATHIESON CHEMICAL CORPORATION
Olin CELLOPHANE ®

© 1958, OLIN MATHIESON CHEMICAL CORPORATION

Q & A

This consultation service on packaging subjects is at your command. Simply address your questions to Technical Editor, Modern Packaging, 575 Madison Ave., New York 22, N. Y. Your name or other identification will not appear with any published answer.

Moisture damage in cartons

Q. *We have been making test shipments of a large-size liquid-holding container. The unit consists of a thin polyethylene bag as a liner for a special corrugated shipping case. The test containers carried about 25 lbs. of water and most of these shipments were made during the summer months. The results were generally very good, except that some of the shipping cases showed softening from excessive moisture pick-up and damage on the inner surfaces of the corrugated board. However, we could not find evidence of bag leakage in those samples. Can you suggest why some of these cases showed excessive moisture pick-up and damage on their inner surfaces?*

A. These test containers carrying water were subjected to typical atmospheric conditions of temperature and humidity during the summer months. This means that during the day the temperatures were higher than at night and the humidities were lower, since this is the typical daily cycle. The degree of these changes to which a shipment would be subjected would depend upon the ambient conditions during the shipping test and the time and kind of exposure. Possibly during this test, some of these containers were subjected to the extremes of temperature and humidity changes that can occur between dry, hot days and cool, humid nights. Under these conditions the thin polyethylene bag will transmit water vapor during the day and the moisture loss will depend upon the temperature of the water and the exterior humidity. This moisture loss will tend to saturate the air in the corrugated structure and also to lower the temperature of the water in the bag. When the ambient temperature falls during the night, or if the case is placed in a cool room, the moist air in the corrugated can be cooled below its dew point (that is, wet bulb temperature) and the case will absorb this condensed water.

However, if the dew-point temperature of the air around the case falls below the temperature of the water in the bag, water droplets will condense on the outer bag surface and this water will be absorbed by the wall of the case. Under this condition the case could absorb excessive amounts of water and severe damage would result. The only possible correction would be to use a thicker ply of polyethylene which would have a lower transmission of water vapor and so would reduce the evaporative cooling of the contained water.

Spoilage insurance for poultry

Q. *We are packing cut-up fresh chicken for a number of self-service markets. The package is a waxed-paper tray slipped into a heat-sealed transparent bag. The product is always kept under cool storage and the stores move it in two days or less (we deliver the day it is packaged). However, we have been advised to label these packages with instructions for the purchaser to cut a hole in the bag before putting the package into the home refrigerator. Why are such instructions advisable?*

A. You are packaging a fresh meat product in a tightly sealed transparent bag to protect it against moisture loss and contamination in handling and to make an attractive unit of sale. However, fresh meat products give off certain gases and absorb other gases as they age. This means that the atmosphere in a tightly sealed bag can become unsuitable for the proper preservation of the meat. When this occurs the chicken can spoil very rapidly. How soon it will occur depends upon the permeability of the bag material to gases such as carbon dioxide and oxygen. Your package apparently is satisfactory for at least the three-day period required to put the product in the home refrigerator. However, there is then no control over the time that can elapse before the product is cooked.

Perforating of the package by the buyer is some insurance against spoilage until the product is used. However, the best insurance against spoilage would be to determine the effective life of the product using bags made from various transparent materials. In this test, some bags of each material should have a number of punched holes.

You might find a transparent bag made from a different film, with or without holes, that would give the maximum package life for this product under these conditions of storage and handling.

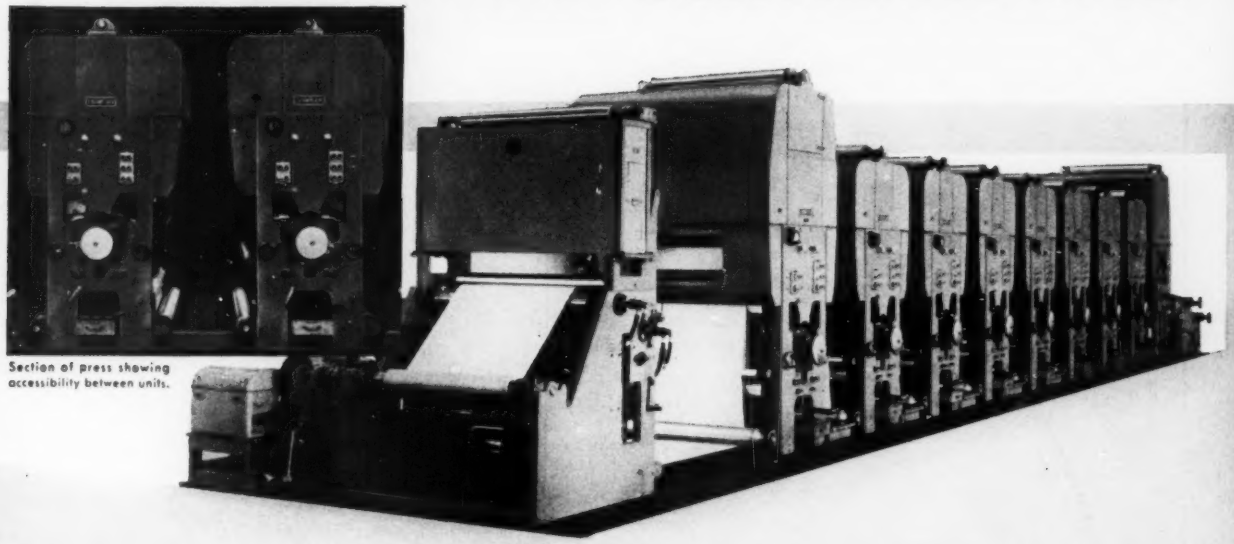
Foil-label removal

Q. *One of our products is distributed in a returnable glass bottle. Recently we improved the appearance of the bottle by going to foil labels in place of paper labels. The new foil labels are very satisfactory in all respects except that our bottle-cleaning plant has difficulty washing them off. What can we do to make foil labels easier to remove?*

A. Foil labels are more difficult to remove than paper labels because the metal foil prevents the usual cleaning solutions from reaching the adhesive that bonds the label to the glass. However, since foil labels have become popular for many returnable glass-bottled products, the problem of their removal has been solved by several changes. The first step is to reduce to a minimum the width of the glue lines. Next, increase the amount of caustic and add a wetting agent to the soak tanks. These changes plus maintenance of water temperatures and agitation should effectively remove paper-backed foil labels from bottles.

The All-New Champlain

Heavy Duty Gravure CONVERTER Press



Section of press showing accessibility between units.

Advanced design features meet the needs of modern printers. The new Champlain CONVERTER leads with:

- Walk-in accessibility between units
- Rapid change-over of cylinders and related parts
- Dual inking system for high speed operation
- Upper and lower limit stops of the impression cylinder
- Totally enclosed splash-proof fountain
- Air-loaded doctor blades
- High velocity, tubular design air dryers
- Rapid traverse hydraulic impression system
- Internal-external gear drive to engraving from drive housing
- Backlash-free worm gear drive

HEAVY DUTY CONVERTER WITH WALK-IN ACCESSIBILITY

The new Champlain Heavy Duty CONVERTER is outstandingly versatile. Printing width is 44 or 54 inches. It accepts cylinders from 20 to 40 inches circumference. Complete roll-to-roll and rewind operation is assured with all types of web material. High speed, plus printing quality, is maintained on a wide range of work including cellophane, paper backed foil, gift wraps, beer labels, bread or frozen food wrappers, wallpapers, etc.

The new walk-in design increases operating efficiencies by saving time on the job and during change-over. Operators walk between printing units to control all adjustments with minimum effort. No platforms or ladders to climb. Threading and webbing is done at hand level. Extended dryer sections are equipped with threading chains.

Maximum economy of operation throughout is assured by the job-tested design of this new Champlain CONVERTER. Proven features, engineered for heavier duty at higher speeds are integrated with new, complementary features for improved performance.

The Champlain Company brings 25 years of design and engineering experience to the latest Heavy Duty CONVERTER. To learn how this new press can improve your production—cut your costs—write us for the New Heavy Duty CONVERTER Press Booklet. Champlain Company, Inc., 88 Llewellyn Ave., Bloomfield, N. J. Chicago Office: 520 N. Michigan Ave., Chicago 11, Ill. In Europe: Bobst-Champlain, Prilly-Lausanne, Switzerland.

Champlain

Champlain manufactures a complete line of rotogravure, flexography, rotary letterpress and allied equipment for packaging and specialty printing.

Equipment and materials

Frozen-food filler

A new machine for filling frozen-food cartons at speeds up to 240 units per min. is offered by Food Machinery & Chemical Corp. It was developed by FMC in cooperation with Marathon Corp., Menasha, Wis. Shown is the Model 16S, whose 16 filling pockets can

be seen on the rotating filling top. (For institutional-size packages, the Model 8S is available, with eight filling pockets. The two sizes of top also are interchangeable for conversion to retail or institutional filling.) The machine uses a straight-line feed that curves slightly at the filling station as shown to permit adequate time for the pre-measured product fill to enter the carton. Cartons are carried in a straight line by means of a lug-chain conveyor synchronized with the pocket spacings of the filler. As they are indexed under a pocket, cartons are filled singly, then travel in a straight line to the closer. There is a "no-carton, no-fill" control. Both filling pockets and carton track can be adjusted to adapt to varying volume requirements or carton sizes. For added protection against waste, the machine is equipped with individual pocket cut-off gates to prevent product damage and build-up caused by pushing a filled carton over the dead plate used in conventional fillers, the company says. *Food Machinery & Chemical Corp., Canning Machinery Div. 333 W. Julian St., San Jose 8, Calif.*

Capper for squeeze bottles

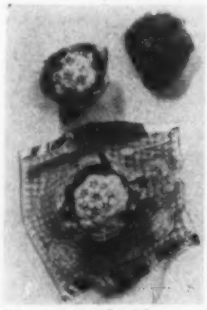
A new group of rotary inserting and capping machines for automatic application of nozzle applicator caps to polyethylene squeeze bottles has been introduced by PMC Industries. Each machine in the series (RI-1200) is a 12-station, continuous-motion machine which performs different operations during rotary motion. The machines take plugs and tubing from bulk stock, assemble them into applicator nozzle caps and insert them into squeeze bottles. Positive control of the dip tube and positive insertion of close-fitting plugs are insured by specially designed features, the company says. A variation of this series of machines is available for automatically placing valve assemblies in aerosol spray cans. *PMC Industries, Inc., 293 Hudson St., Hackensack, N.J.*

New pre-heating system

A new method of transporting highly viscous materials through electrically heated pipelines so that they will be delivered to packaging equipment in a liquid state has been announced by Electric Pipe Line. The Greenwood Packaging Supply Co., Newark, N.J., uses the system for transporting asphalt in the manufacture of insulated bags and chemical companies are filling asphalt directly into containers through electrically heated pipelines. Other suggested uses for the system are for transporting waxes and other materials used to coat paper, paperboard, foil, etc. Material in the pipelines is heated to a temperature of 375 deg. F. without the hazards of the use of live steam or hot oil. Installation reportedly is simple and the equipment is economical to operate, with a minimum of maintenance, according to the supplier. *Electric Pipe Line, Inc., 158 Webster Ave., Jersey City 7, N.J.*

Foil-edge cellophane wrap

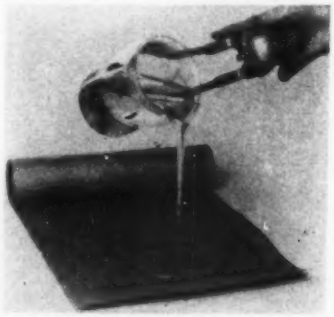
A foil-edge, flexographic-printed cellophane wrap for packaging cauliflower and other produce items is available



from Standard Packaging. According to the supplier, the new wrap speeds production 25% compared with other packaging methods, cuts freight costs in half, doubles product life compared with unpackaged produce and adds greatly to the product's sales appeal. The wrap, which comes preprinted in three colors (red, white and blue), is simply placed flat over the cauliflower, as shown in the accompanying photo. A quick twist of the foil edges seals the wrap securely around the product (top view, left in photo; bottom view at right). The new packaging makes it possible to ship the product in cartons of 12, stacked 12 to 14 cartons high, without bruising or other handling damage, the company says. *Modern Packages Div., Standard Packaging Corp., 4500 E. Dunham St., Los Angeles.*

Low-melt polyethylene resin

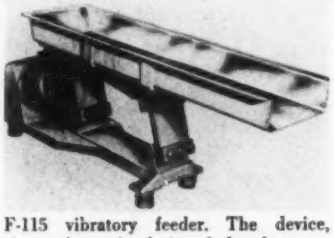
High-gloss polyethylene paper coatings, with or without paraffin modification, reportedly can be achieved using conventional wax-coating machines with Eastman's new low-melt polyethylene, Epolene C. Its new product, the company says, possesses many of the proper-



ties of plastic-grade resins, yet can be handled much like a moderate- to high-melting-point wax. At 300 deg. F., the resin's viscosity is 8,000 cps. The addition of 25% paraffin reduces viscosity to 1,300 cps at the same temperature. It is suggested that the resin, as a hot melt, can be applied with success to virtually all types of paper. The low-melt polyethylene can be handled in conventional wax-coating machines with only slight modifications—including provision for higher temperatures in the fountain. A superior bond is formed between the coating and the paper, says the company, because the melt penetrates into the paper to a greater degree. The paper can also be coated on both sides with the low-melt polyethylene if necessary. *Eastman Chemical Products, Inc., Kingsport, Tenn.*

Fingertip control for feeder

Rheostat control provides fingertip regulation of feed rate—from a slow trickle to a maximum capacity of six tons an hour—says Syntron of its new Model



F-115 vibratory feeder. The device, shown here, is designed for fast, accurate, high-capacity feeding of bulk materials in weighing and packaging operations. It is equipped with a high-speed electromagnetic drive (protected

"Durapak Manufacturing Company provides these superior bags."

Maurice Feldbaum, Triple M Packing Corp. Swanson & Shunk Sts., Philadelphia 48, Pa.

Like other leading packagers, Triple M insists on VISQUEEN film for their bags because they know:

VISQUEEN film is *stronger*. Stands the gaff. In transit, storage and store. VISQUEEN film is *more uniform* in thickness of gauge. Has no weak spots. Won't split, shatter, crack or run. VISQUEEN film is clearer. Shows off your product to better advantage. VISQUEEN film takes print better. No ink rub-off. Your brand identification is strong and easily identified. Send your produce to market in VISQUEEN film packages. You'll get a better package . . . a more economical package.

Write—or use the information request tag for details.

information request tag

VisQueen Trade Mark

clip this tag— PNT
attach to letterhead, mail.

VISQUEEN *film is all polyethylene, but not all polyethylene film is VISQUEEN. Only VISQUEEN film has the benefit of research and resources of VISKING COMPANY.*

PLASTICS DIVISION
VISKING COMPANY *Division of* UNION CARBIDE *Corporation*
P.O. Box 1410 Terre Haute, Indiana
In Canada: Visking Limited
Lindsay, Ontario.

VISKING and VISQUEEN are trade marks of Union Carbide Corporation

Equipment and materials

[Continued from page 146]

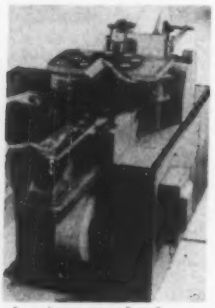
by a dustproof housing) to insure free flow of the material to be packaged. For automatic operations, such as with weigh-scale-controlled packaging, the machine can be fitted with an automatic electronic bulk-and-dribble feed. *Syntron Co., 251 Lexington Ave., Homer City, Pa.*

Economical bagger uses film

The Mehl Mfg. Co. has introduced a new model of its See-Safe polyethylene-film bagging machine (MODERN PACKAGING, Sept., 1956, p. 148). The company's automatic Model M bagger operates at high speeds to form bags of up to 20 in. square that exactly fit the article to be packaged. This latter feature, the company says, offers film-cost savings of up to 50%. In operation, a continuous roll of folded film, mounted at the top of the machine, is drawn over a V-shaped forming plate which opens the film roll for easy insertion of the product. The bags then are automatically heat sealed, with bag width manually adjustable from ½ in. to 20 in. The heat-sealing bar separates the film so that the same sealing cycle finishes one package as it forms the bottom seal for the next. *Mehl Mfg. Co., 2057 Reading Rd., Cincinnati 2, Ohio.*

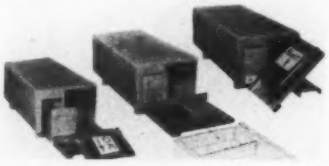
Small-parts packaging

A new packaging machine that automatically prints, fills, heat seals, cuts off and counts flexible packages in a continuous process has been introduced by Product Packaging Engineering. Called the Pax-Mor, it packages small mechanical parts individually or in multiples (see photo) at speeds of up to 6,000 bags an hour, the company says. The machine forms bags of up to 8 by 8 in. from a variety of coated or laminated heat-sealable packaging materials. Available in two sizes, the machine's standard equipment includes: electronic temperature control on its heat-sealing rollers, quick-change sealing sleeves to simplify the changing of bag sizes, electric re-set bag counter, automatic empty-bag ejector and safety cut-off at the bag cut-off blades. *Product Packaging Engineering, 5747 Marilyn Ave., Culver City, Calif.*



Speedy pouch check weigher

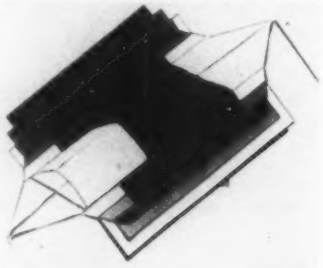
Designed to operate in conjunction with pouch-type package fillers or filler-cartoner combinations, Hi-Speed Checkweigher's Model PA-57 reportedly can check weigh 75 pouches per minute and is accurate within 1 gm. of pre-set weigh



range. The accompanying photograph, giving three views of the electric, compressed-air-operated machine, shows its operation. As pouches or packets come off the filling machine they are discharged onto the check weigher's weighing platform. Correct-weight packages are thrust forward into a receiving bin (left and center views). If the packages are underweight or overweight, the platform tilts to reject the package to the side of the machine (right view). Accessories include control devices to provide a strip-chart record of each package weight and feed-back control to adjust automatically the filling machine. *Hi-Speed Checkweigher Co., Inc., 605 W. State St., Ithaca, N.Y.*

Super-strength multiwall

A flexible multiwall bag with "super-stepped" end for greater strength and siftproofness has been announced by St. Regis. As shown here in the company's four-ply "super-stepped" bag, the plies are staggered as for the regular stepped-end bag, with slits made to form the top and bottom staggered in three different positions rather than in the same position. Glue is applied and the plies



are pasted together. Since each of the three plies is bonded together, as well as the outside ply, a stronger bottom closure results, the company says. The tighter closure is said to provide full protection for such products as chemicals and fertilizers that require asphalt-laminated or polyethylene-coated plies. The bags are made without removing paper from the corners and exposing the natural kraft plies to attack by the material being packed. An improved valve insert insures smooth operation when the bag is placed on the tube of the packaging machine and also contributes to making the bag siftproof, the company claims. *St. Regis Paper Co., 150 E. 52 St., New York 17.*

Film for in-store packaging

Three new pre-printed film wraps for in-store packaging of poultry have been added to Dobeckmun's Stock Products line. Cellophane sheets for fryers and stewing chickens, designed for use with trays (top and bottom of accompanying photo), are available for stores that prefer the tray-overwrap combination. The heat-sealable sheets measure 15 by 15

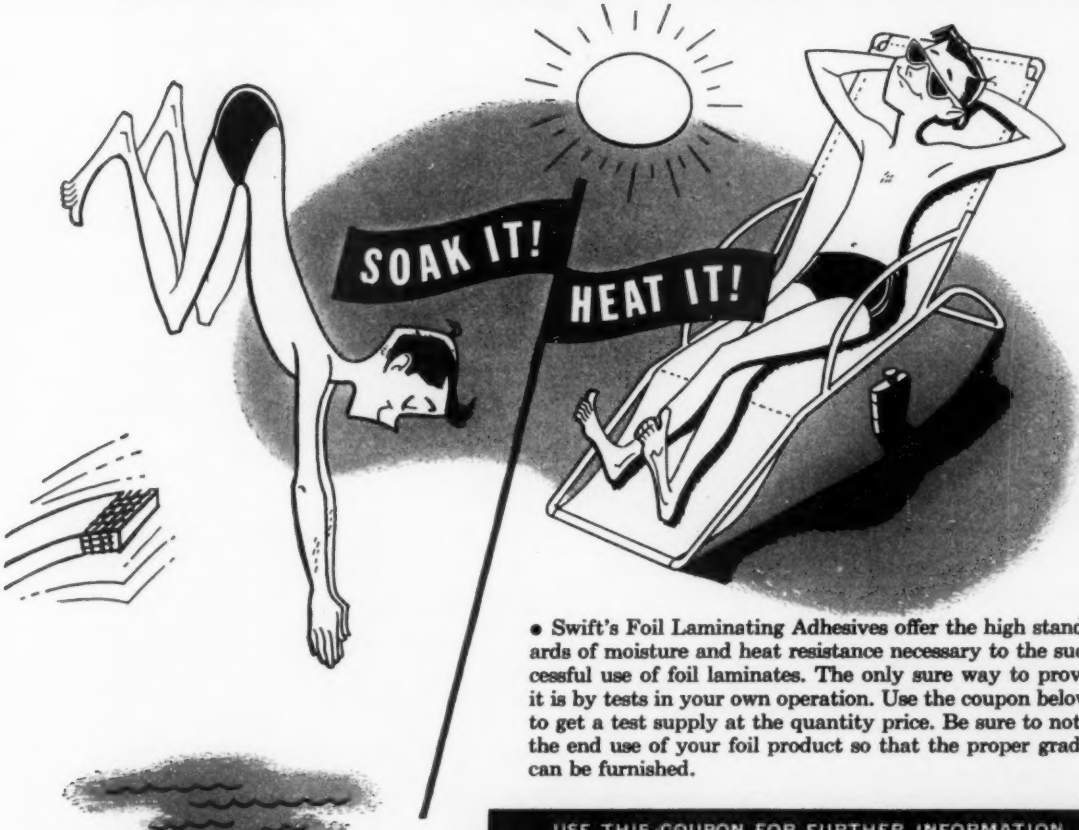
in. Identical in design except for label identification, they come in two different colors so clerks can tell at a glance which display needs restocking. The other new item is a polyethylene poultry "pricer" bag, available in six sizes, for packaging a whole chicken. Like the two overwraps, the pricer bag contains printed panels for marking complete price information. Stores ordering quantities of 20,000 or more of one-size bag may have their names imprinted on the bag at no extra cost, the company says. *The Dobeckmun Co., 3301 Monroe Ave., Cleveland 13, Ohio.*

Adhesive copolymer emulsion

A polyvinyl chloride-acetate copolymer emulsion reported to have exceptional adhesion characteristics is available from National Starch. The product, Resyn 2507, is unique in that it does not require additives, thickeners or pre-emulsification of plasticizers to increase viscosity, the company says. The compatible material can be plasticized directly by the user with monomeric plasticizers or with acrylic latices. It provides balanced adhesion between

Here's how to prove the superiority of

SWIFT'S FOIL ADHESIVE



• Swift's Foil Laminating Adhesives offer the high standards of moisture and heat resistance necessary to the successful use of foil laminates. The only sure way to prove it is by tests in your own operation. Use the coupon below to get a test supply at the quantity price. Be sure to note the end use of your foil product so that the proper grade can be furnished.

Swift
102ND YEAR

To Serve Your Industry Better

with these ADHESIVE PRODUCTS

Resins and Rubbers in Emulsion or Solvent
Industrial Bonding Compounds
Dry, Liquid and Flexible Animal Glues
Liquid Dextrin Adhesives

USE THIS COUPON FOR FURTHER INFORMATION

Swift & Company
Adhesive Products Dept.
Chicago 9, Illinois

Please send me a ten gallon drum of Swift's Foil Adhesive at the quantity price. End use of our foil product is

.....

Name.....

Title.....

Company.....

Address.....

City.....Zone.....State.....

Consult Mack for Special Packaging

If you have a packaging problem, or special packaging idea, Mack Molded plastics may be the solution. Mack technicians offer a 3-way service on product packaging, custom closures and merchandising sales aids. Mack will assist in the development of your idea, make recommendations on materials selection and collaborate on design. For help based-on-experience, just call or write, outlining your problem.

Standard Closures Available from Stock

Mack molded plastic closures, in all stock sizes, are available for prompt delivery. Select the design best suited to your product from the wide variety offered by Mack. Samples promptly on request: address Mack Molding Company, Inc., Wayne, N. J.

Serving Industry for Over 35 Years

Plants at —
WAYNE, NEW JERSEY
ARLINGTON, VERMONT
WATERLOO, P.Q., CANADA

MACK Molded Excellence

H&H•H&H•H&H•

Equipment and materials

[Continued from page 148]

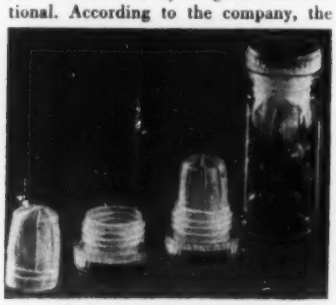
vinyl and polar materials and combines the properties of polyvinyl chlorides and polyvinyl acetates in the wet state, according to the supplier. Other cited advantages of the fire-retardant resin are: good wet tack, mechanical stability, superior hold-out on porous surfaces, easy heat sealing and adhesion versatility in many formulations. *National Starch Products, Inc., 270 Madison Ave., New York 16.*

New glassine paper

A translucent, dense glassine paper designed for packaging surgical products has been introduced by Rhinelander. Called Steriblu Glassine, the paper reportedly withstands the high temperatures and varying pressures of autoclave sterilization and protects the sterility of its contents until the package is opened for use. The printable paper can be used on high-speed packaging machinery, the company says. *Rhinelander Paper Co., Sub., St. Regis Paper Co., Davenport St., Rhinelander, Wis.*

Expanding bottle closure

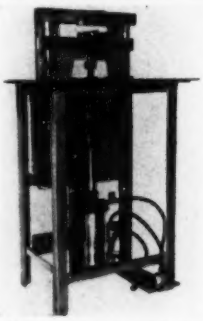
A flexible polyethylene pill-bottle closure that expands as tablets are removed from the bottle to hold the remaining contents firmly in place has been introduced by Pegasus International. According to the company, the



expandable closure also protects pills from breakage during shipping. The accompanying photo shows the operation of the closure in step-by-step sequence. At left is the polyethylene insert, slit vertically to provide the necessary flexibility during usage. This piece snaps into the polyethylene screw cap (second from left) to form the completed closure (beside bottle). When the closure is applied to a filled bottle of pills, as at right, the slit sections of the insert flare out as it flattens upon making contact with the pills. As pills are removed, the closure expands accordingly. The closures are available in three styles to accommodate various shapes of containers. *Pegasus International Corp., 1 E. 53 St., New York 22.*

Adjustable package bander

A multi-unit package-banding machine which can be controlled in tension has been introduced by Tee-Pak. Designed to use cellulose bands, the machine (shown here) fits a seamless band over two or more packages, combining them into a secure single unit. The machine is said to band heavy products where great strength is required (such as two quart cans of beer) or extremely fragile items (such as two packages of crackers). It operates at an average production speed of 20 units per minute, according to the company. *Tee-Pak, Inc., 3520 S. Morgan St., Chicago 9.*



Inhibitor-treated film

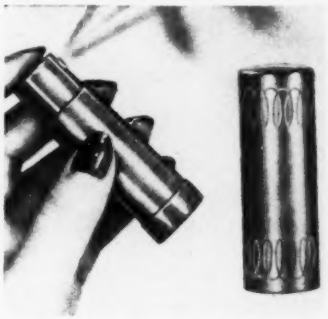
High product visibility and long-term rust prevention are the cited advantages of Daubert's heat-sealable polyester film for packaging metal products. Called MY-V-I, the high-tensile-strength film is coated on one side with a transparent composition containing volatile corrosion inhibitors. When formed into a package, the coated surface of the film becomes the inner wall and the volatile chemicals act to neutralize the corrosive tendencies of any water vapor that may be present in the sealed package. The treated film is reported to be extremely effective as a packaging material for small products made of steel and other ferrous metals, as well as aluminum. *Daubert Chemical Co., 333 N. Michigan Ave., Chicago 1.*

Basic weight classifier

Designed for more accurate classification of packaged items by weight, Exact Weight's new Basic Weight Classifier also can be used to inspect open or closed packages for correct contents. Shadograph scales used in the classifier are available in 34 different models, with capacities ranging from 2,000 milligrams to 100 pounds. Adjustable crystal photocells mounted adjacent to the scale's visual dial provide an electric signal when pre-set weight limits or allowable tolerance settings are reached. Two or more photocells can be mounted to provide any number of classifications from two to 128. A controller unit operates relays to open and close circuits when the weight is reached. It may be used to actuate automatic-transfer mechanisms; to operate counters, visual signal lights or alarm signals, and to actuate permanent visual chart recorders for statistical and quality control of processes. *The Exact Weight Scale Co., 538 E. Town St., Columbus Ohio.*

Aerosol atomizer

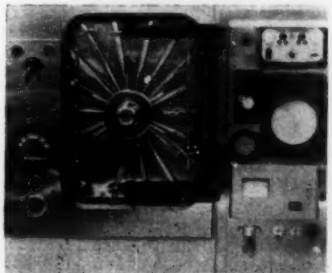
An aerosol perfume atomizer with polyethylene applicator and decorative metal cap is offered by Richford. As shown



in the accompanying photo, gentle downward pressure on the applicator actuates a fine spray of perfume. In closed position, the gold-washed metal cap (right) rests on the atomizer's projecting base, with the top of the closure extending above the tip of the applicator to guard against accidental discharge. *Richford Corp., 3618 Oceanside Rd., Oceanside, N.Y.*

Fast gas sterilization

Automatic gas-sterilizing equipment for faster sterilizing of finished packaged materials as well as heat and moisture-sensitive products has been introduced by Wilmot Castle. Called Sterox-O-Matic, the equipment is available in re-



cessed (as shown) or cabinet models. Because the units are completely automatic, optimum conditions of temperature, pressure and humidity can be maintained in sterilizing the contents

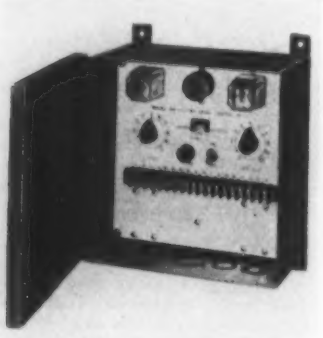
Equipment and materials

[*Continued from page 151*]

of pre-sealed plastic, paper or paperboard containers, the company says. The equipment is suggested for sterilizing such pre-packaged products as rubber goods, adhesives, delicate instruments and powders. All phases of the sterilizing cycle are visually indicated by a set of signal lights on the front of the unit, which also contains a two-pen pressure-temperature graph for recording each cycle. The sterilizing medium, Steroxcide 20 (a combination of ethylene oxide and carbon dioxide), combines optimum sterilizing efficiency with minimum exposure time, the company says. This non-hazardous gas penetrates and sterilizes the contents of sealed paperboard, polyvinyl or paper containers and is dissipated by exhaust to the outside. *Wilmot Castle Co., 1906 E. Henrietta Rd., Rochester, N.Y.*

Simplified check weigher

Avion's new two-level control relay (shown here) is said to be especially suitable for check weighing and rejecting underweight and overweight packages, for sorting into weight groups and for accurate process control of pre-set



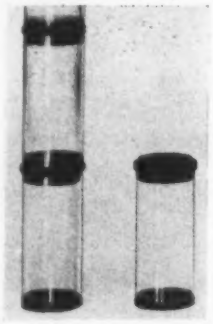
weight limits. The automatic unit, which uses no vacuum tubes, functions reliably at high speeds, the company says. Its simplified design utilizes transistors and magnetic amplifiers. *Avion Div., ACF Industries, Inc., 11 Park Pl., Paramus, N.J.*

New greaseproof boards

Two new greaseproof paper boards developed for the box-making industry are claimed to have special advantages as bottom boards and U-boards for cookies and high-shortening baked products. One consists of two sheets of lightweight food board laminated with polyethylene film; the other is made up of a sheet of bleached sulphate coated with polyethylene on one side, then electrostatically treated. *Leedpak, Inc., 294 Fifth Ave., New York 1.*

Stackable plastic vials

Celluplastic has developed a new polystyrene closure constructed to permit secure lock stacking of shell vials up



to a height of six vials or more. A circular projection on the molded top closure fits snugly into a recess of slightly greater diameter in the bottom closure so that the vials can be more easily stacked on store shelves. The company is producing the lock-type closures for its stock line of 1⅜-in.-diameter flexible butyrate shell vials, which are available in a variety of lengths. Other diameters will be marketed shortly, the company says. *Celluplastic Corp., 50 Ave. L., Newark 5, N.J.*

Boilable packaging film

Another low-cost, heat-sealable polyester film especially designed for foods that are to be boiled in the package has been added to 3M's "Scotchpak" polyester-film line. The 2-mil film (No. 20A5) is heat sealable on one side, has a tensile strength of 7,800 lbs. per sq. in. and a burst strength (Mullen) of 40 lbs. per sq. in. It retains its chemical and physical properties over a temperature range of minus 70 deg. to 240 deg. F. and is impervious to oils and most acids, bases, solvents and volatile elements. *Minnesota Mining & Mfg. Co., 900 Bush Ave., St. Paul, Minn.*

Durable box tape

A thermoplastic-laminated gummed box tape that is reportedly unaffected by temperature extremes is available from Gummed Products. Called Trojan Tro-Lox Tape, it is reinforced with uniformly spaced glass fibres set perpendicular to the tape's edge. This treatment, the company says, makes the tape exceptionally strong. The product comes in three weights: heavy, regular and light. *The Gummed Products Co., Sub. St. Regis Paper Co., 421 S. Union St., Troy, Ohio.*

Color flexographic plates

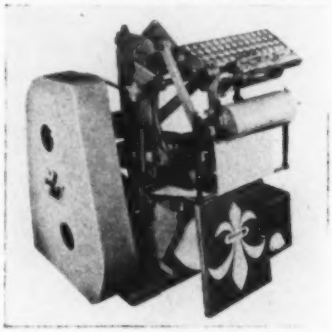
Process-color rubber printing plates designed for experimenting with full-color reproduction by flexography are available from Mosstype. The test plates are three-color, 75-line-screen plates that reproduce a vignette in a 4-by-6-in. area. They can be printed on film, foil, smooth paper or coated board. Sets of plates are available in plain-back, precurved or brass-back styles. When supplied for printing on transparent film, the set of plates includes a white back-up plate. *Mosstype Corp., 150 Franklin Turnpike, Waldwick, N.J.*

New polyethylene coating

Rowe reports the availability of a new coating said to provide a hard gloss and glassy finish on polyethylene of all types. Called Amiloc, the coating reportedly increases clarity, is scuff- and solvent-resistant, is a good gas barrier and possesses excellent adhesion and flexibility properties. Other cited advantages of the product: It can be tinted to any shade, it is compatible with metallic powder and it can be used either as a lining or top coat for decorative purposes, or to protect printed designs. *C. L. Rowe Corp., 61 Van Dam St., Brooklyn 22.*

Leaf-embossing printer

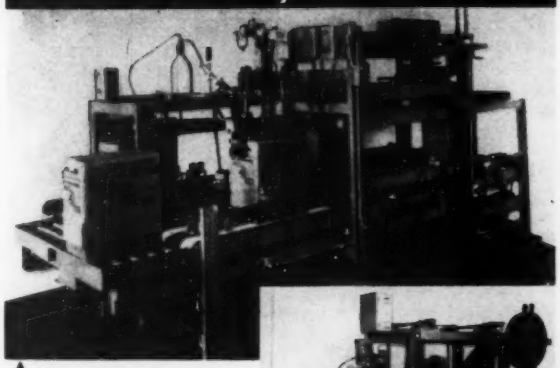
Markem's new Model 45G printing machine is designed for quality leaf embossing on boxes, bags or envelopes at speeds of up to 45 imprints per minute. The hand-fed machine, equipped with a



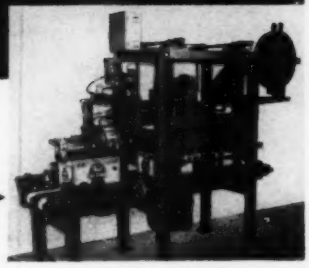
thermostatically operated pre-heater to keep type warm for immediate use, employs leaf to imprint trademarks and product date in one operation. It is said to be especially suitable for making light imprints against a dark background, or for materials which cannot be clearly printed with other marking compounds. Shown in the photo is a box leaf embossed by the machine. A full range of colored leaf is available from the supplier. Color changes can be made rapidly and multiple-color imprints can be made at low cost, the company says. *Markem Machine Co., 150 Congress St., Keene 11, N.H.*

The Most Dependable Line . . . GENERAL

CASE SEALING with TAPE and/or GLUE



Carton-Maker. Bottom Flap Gluer and/or Taper before filling. Can also seal top flaps after filling.



Carton Tape Sealer. Top and/or bottom flaps, also onto end panels as required.

General's Tape Sealer, a natural for rule 41, tape seals automatically up to 25 or more cases per minute, single-strip, top and/or bottom flaps only, plus end-panels, if required. Easier to open. Permits re-use. Makes dust and pilfer-proof seal.

SAVES PRODUCTION TIME

General's Carton Maker is a bottom flap-gluer and/or taper of unfilled cartons. Has "U" return delivery to common roller table. (Pat. Pend.) Has closed-system for gluing. There's no need for "clean-up", it's always ready. Saves ½ hour production time daily per line.

CLOSED-SYSTEM CAN REPLACE GLUE POT METHOD IN OTHER MACHINES NOW IN USE.

ALSO IT'S A TWO PURPOSE MACHINE because it can SEAL TOP FLAPS AFTER FILLING.

HAS NO EQUAL

General's case sealers have all the design features that engineered the un-equaled "General Line" for taping or gluing the "manufacturers-joint" in container manufacturing plants throughout the industry.

It costs to put off . . . Wire or Phone Now . . .

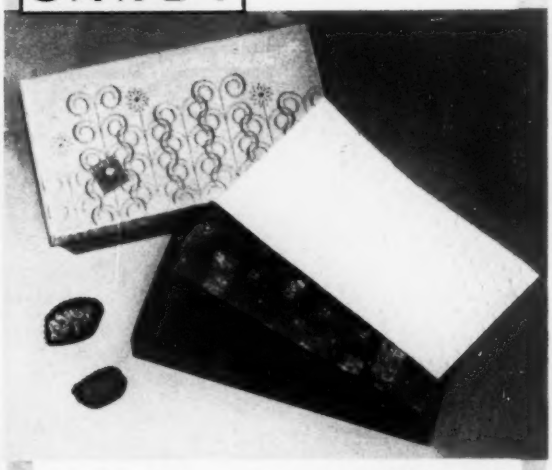
GENCO, Palisades Park, N. J. and GENCO, Hamburg, Germany.

GENERAL CORRUGATED MACHINERY CO., INC.

PALISADES PARK Winfield 4-0644 NEW JERSEY

LOFT'S CANDY

special selection



For the interior — four items — LINERS, CUPS, PAD, LINING.

Hamersley **WHITE GLASSINE**, printed and waxed *Liners* for maximum flavor and aroma protection.

Hamersley **CHOCOLATE GLASSINE SLIP EASY** is converted into *Fluted Cups* which nest the different varieties neatly for protection, economy and eye-appeal.

Hamersley **WHITE GLASSINE** on one side of *Cushion Pad* prevents damage to coating and topping.

Hamersley **CHOCOLATE GLASSINE** *Lining* on inside of box blends with color scheme; enhances appearance; offers overall protection.

CANDY MAKERS can be assured of freshness, aroma and flavor protection, as well as compelling eye appeal with HAMERSLEY quality for all candy products.

CONVERTERS can assure their customers of the same high quality plus maximum efficiency on all high-speed converting equipment by using HAMERSLEY GLASSINE and GREASEPROOF PAPERS.

81 years of quality and service

HAMMER BRAND

THE HAMERSLEY MFG. CO. PAPERMAKERS

Plants and people

D. B. Benedict has been elected a vice president of **Union Carbide Corp.**, New York. He will be responsible for the firm's chemicals and plastics activities. **E. E. Fogle** has succeeded Mr. Benedict as president of **Union Carbide Chemicals Corp.**, a division of the corporation.

H. D. Kinsey has been appointed president of the newly formed **Union Carbide Olefins Co.**, which will handle production and sale of the corporation's hydrocarbon products. **R. N. Graham** and **W. F. Reich, Jr.**, have been made executive vice presidents of the new division.

Other new vice presidents include: **N. C. Babcock, L. J. Bowditch, G. T. Felbeck** and **E. P. Shetter.**

W. C. Quinby has been appointed assistant sales manager of flexible packaging materials for **Bakelite Co.**, Div. of Union Carbide Corp.

Tilden

Freeman Tilden was recently appointed advertising and sales promotion manager of **Nashua Corp.**, Nashua, N. H. Mr. Tilden was formerly with a Boston advertising agency as account executive and member of the agency's industrial plans board. Prior to his agency work he had been active in the field of sales and marketing

Stan Thomson has joined the **R. A. Jones & Co., Inc.**, Cincinnati, Ohio, as sales promotion manager. He was formerly with the **Robert Gair Div.** of **Continental Can Co.** as head of their Eastern mechanical packaging department.

T. W. Brown, Jr., has been appointed general sales manager and **Philip Williams**, assistant sales manager of the Multiwall Bag Div. of **Owens-Illinois Glass Co.**, Toledo, Ohio. **Norman C. Marsh** has been promoted to manager of Pacific Coast Div. sales in Seattle, Wash. He succeeds **Robert T. Blowney. George H. O'Donnell** has been made manager of pharmaceutical and proprietary sales for O-I's Glass Container Div. **Joseph J. Geagan** is now in charge of prescription-ware sales for the division.

Brown

Williams

Western-Waxide Div. of **Crown Zellerbach Corp.**, San Francisco, is expanding its packaging, research and development facilities in San Leandro, Calif., scheduled for completion next month. **James O. Armstrong** has been appointed divisional purchasing agent at Western-Waxide's headquarters in San Leandro. He replaces **John Plankinton**, who has been promoted to assistant resident manager of the division's St. Louis, Mo., plant.

Cory Dwight has been appointed manager of Crown Zellerbach's San Diego branch, which recently moved to a new location in nearby National City, Calif. Mr. Dwight succeeds the late **A. L. Cook. Walter F. Goodman**, a company representative in Dallas, has retired.

The Gaylord Container Corp., div. of Crown Zellerbach, recently placed in operation a new Pandia Chemi-Pulper continuous digester at its wood-pulp mill in Bogalusa, La. The unit operates in regular production of neutral sulphite semi-chemical pulp from hardwood chips at a designed capacity of 150 tons per day of corrugated-board grade pulp.

Crown Zellerbach's new $4-million multiwall bag plant at Bogalusa, La., is now in production. Its production capacity of more than 50 million bags a year will be employed to serve the company's Southern, Midwestern and Eastern customers.

Sparks

Charles D. Sparks has been elected vice president in charge of western sales for **Hinde & Dauch, Div. of West Virginia Pulp & Paper Co.**, Sandusky, Ohio. He succeeds **William F. Pfeiffer, Jr.** Mr. Sparks is replaced as Chicago district sales manager by **Max T. Beatty.** The sales department of Hinde & Dauch's Cleveland plant is now supervised by **Paul H. Roberts**, vice president in charge of central sales.

West Virginia Pulp & Paper Co. has appointed **W. H. Smith Paper Corp.** of Albany, N. Y., as a distributor for its Westvaco business papers. The company recently installed a new coating unit for production of coated bleached-board products at its Covington, Va., mill.

Byron L. Wemhoff has retired after 22 years of service with the company.

John Stevens has been elected a vice president of **American Can Co.**, New York. Mr. Stevens was president and chairman of the former Marathon Corp. before its recent merger with Canco. At the same time, **Roy J. Sund**, who was executive vice president of Marathon, was named vice president and general manager of the newly formed Marathon division of American Can. **Leo E. Croy** has been appointed a vice president of the new division. Each of the four operating divisions of the Marathon division is to be supervised by a vice president. **Milan Boex** is in charge of the northern products division; **Donald A. Snyder** will direct the food packaging division; **Russell C. Flom** will head the pulp and paper division, and **Palmer B. M. McConnell** will be in charge of the specialty packaging division. The Marathon Div. finance department will be organized by **Emmett W. Below**, newly appointed vice president, while the division's industrial relations will be handled by **Carl R. Geisler**, a recently appointed vice president. **Doug G. Hyde** will be director of the administrative services division; **Ross C. Wilcox**, director of research and development, and **E. E. Den Dooven** will direct manufacturing services. **Edwin N. West** will head the division's legal department.

The American Can Co. has recently opened a new can-making plant at Blue Ash, Ohio. The company is now operating a coil-steel processing plant at Milwaukee, the fourth such facility of Canco's $27 million program. In Puerto Rico, the **Puerto Rican Can Co.**, a subsidiary of American Can, has completed a plant for the mass production of cans to service the island's industries.

According to Canco, the company's physical expansion in 1957 has totalled about 1,500,000 sq. ft. in 15 locations, the major part of which is being used to facilitate Canco's coil-processing program and new can-making plants.

The Semet-Solvay Petrochemical Div. of **Allied Chemical & Dye Corp.**, New York, has installed new manufacturing facilities at its Buffalo, N. Y., plant for large-scale production of atomized A-C polyethylene.

Alexander McCurry, former packaging division manager for **National Biscuit Co.**, has been elected vice president of **Arrow Press, Inc.**, New York, which is now producing color labels for companies in the packaging field.

Dierking

Baldwin

Warren Dierking has been appointed director of purchases for **The Dobeckmun Co., Div. of The Dow Chemical Co.** Cleveland, Ohio. **Fred Baldwin** has been promoted to the newly created post of director of graphic arts. **Albert Eamer** is now assistant manager of Dobeckmun's two Cleveland

"A case for automation"

Boxes seal themselves on this streamlined Hotpoint packaging line. Close tolerance H&D corrugated boxes make it work. Result: Faster packing, 30% labor savings. Better see H&D.

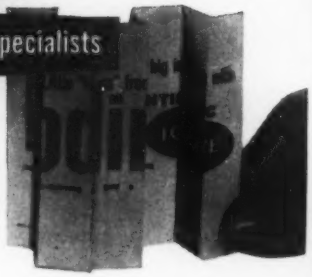
HINDE & DAUCH

Subsidiary of West Virginia Pulp and Paper Company

AUTHORITY ON PACKAGING • SANDUSKY, OHIO
14 FACTORIES • 42 SALES OFFICES

Using package inserts?

Call on Carey—the package insert specialists



Carey Press has the specialized know-how and the specialized equipment to handle every type of package insert job. Result: Carey customers get quick delivery of high quality work at low prices. Find out how 1/16" saved more than $4,000 with Carey-Purchasing Agent consultation.

round-the-clock operation
1, 2, 3, and 4 color printing presses
large and small runs
inventory roll stock with sheeting equipment
printing for special chemical tolerances

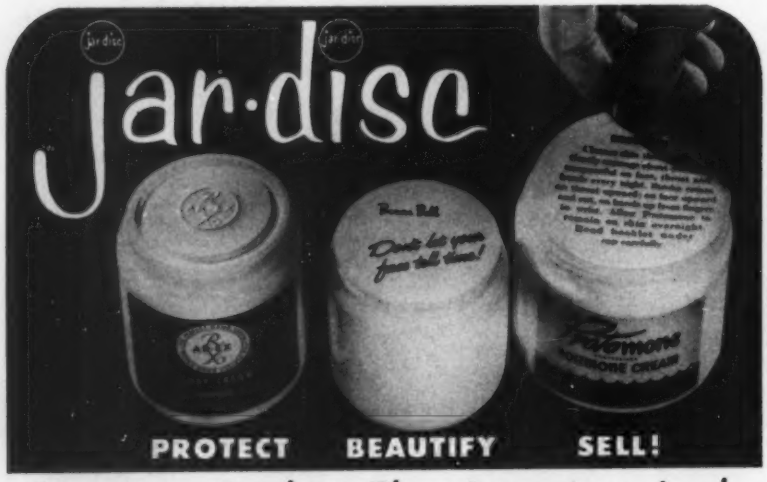
See for yourself. Get in touch with Arthur Friedman, Printing Engineer and Sales Mgr., and find out why so many leading companies "call on Carey" for their package insert jobs.

63 years of achievement

CAREY TRIAL RUN SERVICE eliminates tie ups in your packaging production line.

Carey Press will supply you with a quantity of blank stock, cut and folded to the exact size of your package inserts, for testing on your automatic inserters and other packaging production equipment. That way you're sure you can handle the job before you give Carey the go ahead.

CAREY PRESS CORP. / 406 WEST 31st STREET / NEW YORK 1, N. Y. / CH. 4-1000



Give Your Product That Luxurious Look

A secondary seal to insure product freshness and appearance. Oyster white, opaque, matte finish, vinyl—impervious to alcohol, moisture, oil or hot-packed products. Keep jar lids clean and dry.

Your logotype embossed or hot stamped for beauty—printed directions or sales message on flat discs often eliminates a label.

Jar Discs cost surprisingly little—come in flat or formed, embossed or printed styles. Write for samples and quotations on your letterhead. Indicate sizes and quantity if possible with sample jar for exact fit.

THE WALTER FRANK ORGANIZATION

Design and sale of packaging components. Box 111C, Elmhurst, Ill.

Plants and people

plants. He is succeeded as superintendent of the Brookside plant by **Austin E. Dawson.**

Wolfe

Dan Wolfe, who was with J. L. Ferguson Co. for many years in a sales capacity, has joined the sales staff of **Food Machinery & Chemical Corp.**'s package-machinery division and will locate in Hoopeston, Ill. In his new position, Mr. Wolfe will be working in conjunction with **Marathon Paper Corp.** and the Marapak machine.

Adolph Potdevin, chairman of the board of **Potdevin Machine Co.,** Teterboro, N. J., recently celebrated his 90th birthday at a gathering attended by members of his family and employees of the company he founded in 1893.

Fasson Products, Painesville, Ohio, has expanded its activities in the field of self-adhesive materials with the opening of a Technical Center and general office building. Half of the company's facilities will now be devoted to self-adhesive materials for the packaging and graphic-arts fields, including self-adhesive papers, metallic foils, fluorescent papers, plastic films, transparent films, as well as the jar labels which they have made for many years. The company's new Technical Center contains a sample room with more than 2,000 different self-adhesive materials.

Kuder

Bemis Bro. Bag Co., St. Louis, Mo., has appointed **Dr. Robert C. Kuder** as technical director of the Bemis Research Laboratory, Minneapolis. Prior to his appointment, Dr. Kuder was supervisor of polymer research, Barrett Div., Allied Chemical & Dye Corp.

Albert J. Locatelli has been named West Coast regional sales manager in San Francisco for the Bakery Div. of **American Machine & Foundry Co.,** New York.

George Logdon has been appointed industrial engineer of the Lancaster closure plant of **Armstrong Cork Co.,** Lancaster, Pa. He succeeds **Richard T. Castner.**

Bagcraft Corp. of America, Chicago, has moved to 3900 W. 43 St. in Chicago, where both manufacturing facilities and general offices will be housed.

W. B. Shelly of **W. B. Shelly & Co.,** Toronto, packaging and materials handling machines, has been named Cana-

dian agent for **Battle Creek Packaging Machines, Inc.**, Battle Creek, Mich.

Ferguson

Vulcan Containers, Inc., Bellwood, Ill., has appointed **Lawrence M. Ferguson**, sales manager, as vice president for sales. He succeeds **Herbert B. Scharbach**, who resigned. **Eugene W. Gehm** has been named assistant sales manager. Mr. Ferguson, who has been with Vulcan for 19 years, was made assistant sales manager in 1950 and sales manager in 1956.

Alice C. Shelley has been appointed director of public relations for **Becker & Becker Associates**, New York industrial designers.

David F. Lowry has been promoted to manager of the recently created new products department of the Polyco-Monomer Dept. of **The Borden Co.**, New York.

Pauline

National Container Corp., a subsidiary of **Owens-Illinois Glass Co.**, Toledo, Ohio, has appointed **Paul J. Pauline** to the new post of general manager of its plant at Madison, Ill., which services industry in the St. Louis area. Mr. Pauline was formerly with Wabash Fibre Box Co.

Announcement has been made of the formation of a new plastics company, **Gold-Mark Plastic Compounds, Inc.**, 4-05 26 Ave., Long Island City 2, N. Y., which will service domestic and foreign markets with thermoplastic compounds, do custom compounding and purchase and sell surplus plastics stocks. President and general manager of the new firm is **Herbert H. Goldmark. George W. Weir** is vice president and director of purchases, while **Kenneth Gross** is vice president and sales manager. All three men were formerly with American Molding Powder & Chemical Corp. and A. Bamberger Corp.

The Colgate-Palmolive Co., New York, has elected **Dr. John R. Brown, Jr.**, as a director and vice president in charge of research and development. Dr. Brown was formerly connected with the Spencer Chemical Co.

Swift & Co., Chicago, has established a new British adhesive products plant near London, under the management of **Harry J. Hoberg.**

Kolar Laboratories, Inc., recently purchased two new buildings, located in Chicago, which will provide a total floor space of 137,000 sq. ft. The firm specializes in custom packaging of cosmetic and toiletry items.

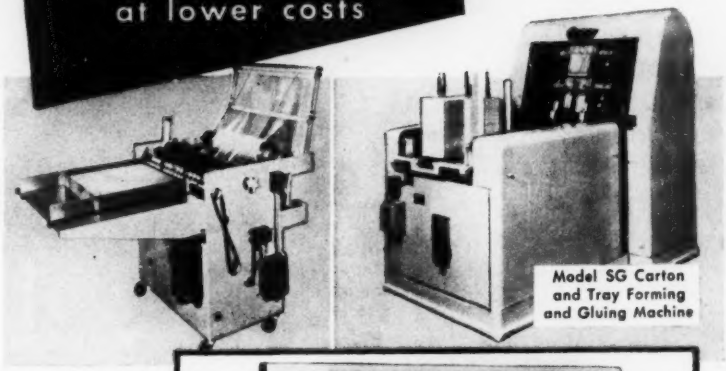
Robert N. Conners, executive vice president of **Chase Bag Co.**, Chicago, has retired. He will continue as a director of the firm.

George W. Williams has joined

Peters
PACKAGING MACHINES
produce
better packages
at lower costs

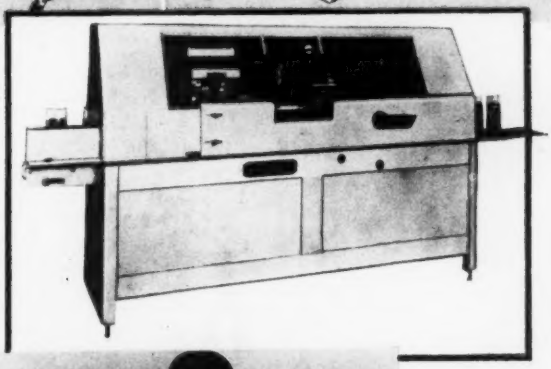
PACKAGING MACHINERY MANUFACTURERS INSTITUTE PMMI

Produces up to 175 cartons and trays per minute! Peters Model SG automatically converts low cost blanks into perfectly shaped glued cartons and trays.

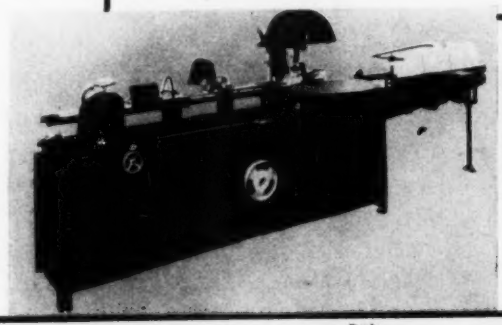


Model SG Carton and Tray Forming and Gluing Machine

▲ Cut and stack up to 5760 sheets per hour with Peters Model UD Cellophane Sheeting and Stacking Machine

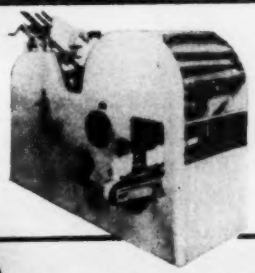


Seal bags and apply labels at speeds up to 70 per minute with Peters Model L2 Bag Sealing and Header Applying Machine



Close up to 150 cartons per minute with Peters Model CCY Carton Folding and Closing Machine

Form and line up to 120 cartons per minute with Peters Model SE Carton Forming and Lining Machine.



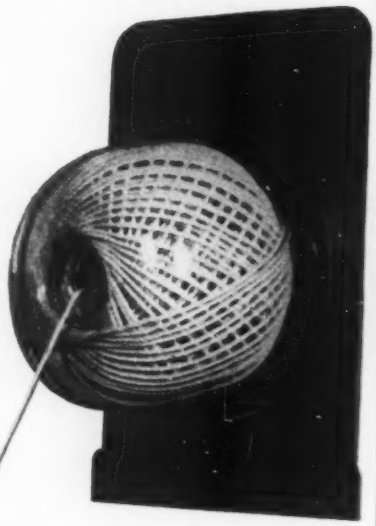
LEASE IT . . . PAY AS YOU PROFIT!

Write for details about our new leasing program for these and other Peters high speed automatic packaging machines.

Peters MACHINERY COMPANY
4712 Ravenswood Avenue
Chicago 40, Illinois
Phone: LOngbeach 1-9000

this SLIDEPLAX package puts a new twist in selling twine

Twine has always been an "under the counter" item. The Linen Thread Co., quality manufacturers since 1874, wanted to put their twine on top of the merchant's counter and on to the kitchen wall. Created by Plaxall, Inc., this crystal dome package has paid off handsomely in rapid turnover and extra sales.



The ball of twine drops into the plastic dome ... the cardboard slides into place and the Slideplax package is complete.

Here are its features:

SMART LOOKING in its clear plastic disposable dispenser.

TANGLE FREE twine draws freely through reinforced hole in the plastic dome.

A NEW CONVENIENCE — handy on the wall of kitchen, shop, or garage; and it's good to the last inch.

A NEW MARKET — glamour and utility have made twine an "impulse" item with fast turnover and steady profits.

NESTING — packs 10 to an inch. Saves on shipping, storage, and handling.

PRECISION MANUFACTURE. Plaxall's exclusive process brings to plastic forming the precision of metal stamping.

LOW COST — achieved by precision high speed continuous automatic machinery.

THE WORLD'S LARGEST PRODUCERS OF THERMOFORMED PRODUCTS AND PACKAGES

SLIDEPLAX

THE PACK WITH THE TRACK

Why not find out what "SLIDEPLAX" packaging can do for your product. *Call or write*

PLAXALL, INC.

Long Island City 1, New York · Telephone STillwell 4-4800

Plants and people

Chase Bag as a special representative in the Dallas sales office.

Murphy

Paul Murphy, general manager of packaging market sales for **Reynolds Metals Co.**, Louisville, Ky., has been named a vice president of **Reynolds Aluminum Sales Co.** Mr. Murphy will continue his duties in the packaging division.

Robert H. Deutsch has been named director of advertising and sales promotion for **Arrow Brands, Inc.**, a subsidiary of Reynolds.

Fred P. Ritchie has been appointed plant manager of the new Santa Clara, Calif., paper mill of **Container Corp. of America**, Chicago.

J. H. Tigelaar has been appointed manager of research and development for **Cadillac Products, Inc.**, Warren, Mich.

The General Box Co., Des Plaines, Ill., has announced the election of **T. W. Regan** as president. Mr. Regan, formerly vice president and sales manager, succeeds **J. A. Cragwall**, who has been elected chairman of the board. **N. W. Embry**, who retired from active duty several years ago, has resigned as chairman of the board, but will continue as a company director. **D. B. Forrester, Jr.**, has been appointed to succeed Mr. Regan as vice president and sales manager. The three new officials will lead an expansion program already under way aimed at increasing corrugated-box volume and markets for wirebound containers.

Regan

Crystal Tube Corp., Chicago, has acquired **Utility Plastic Bag Co.**, converters and printers of polyethylene.

Thomas S. Williams has been elected vice president in charge of the technical division of **Dixie Wax Paper Co.**, Dallas, Tex. **H. V. Brady** has joined the company as manager of the research and development department.

The Cryovac Co. Division of **W. R. Grace & Co.**, Cambridge, Mass., has announced two changes in sales assignments at its Western Div. **William P. Harrison**, formerly Western Div. sales promotion manager in Denver, has moved to a Cryovac field sales post in the same area. **Jack L. Schiffour** has been named to succeed Mr. Harrison and will locate in Cryovac's new Western Div. sales promotion headquarters at Cedar Rapids, Iowa.

Grace company's **Dewey & Almy Chemical Co. Division** has announced

Irons shown—General Electric Spray, Steam and Dry Iron (Model #F-61).

Up to 500% faster with new-type product labels reverse-printed on tough, durable Kodapak Sheet!

Think of it! 1500 to 1800 product labels per hour—instead of 360! *Up to 5 times as many as before!*

But that's only part of it! Goodstix Product Identifiers* look better and last longer. Reverse-printed in one to six colors on transparent 2 mil Kodapak Sheet, they are two ways better: (1) because Kodapak is compatible with printer's ink, colors keep their original brilliance and sparkle; (2) because printing is reversed, and on the back of the label, your message is protected by a wall of crystal-clear Kodapak Sheet—unaffected by moisture, friction, or dirt.

It would pay you to get more information about these new product labels, window streamers and posters—all printed on Kodapak Sheet for beauty and longer life. Call our representative or write.

Cellulose Products Division
EASTMAN KODAK COMPANY, Rochester 4, N.Y.

*Goodstix Product "Identifiers" are pressure-sensitive labels printed on Kodapak Sheet by Goodren Products Corp., Englewood, N.J.

Kodapak Sheet MAKES GOOD MERCHANDISE BETTER

Kodapak . . . trademark for Eastman's plastic sheet.

Sales Offices: *New York, Chicago, Atlanta.* Sales Representatives: *Cleveland, Philadelphia, Providence.*
Distributors: *San Francisco, Los Angeles, Portland, Seattle (Wilson & Geo. Meyer & Co.); Toronto, Montreal (Paper Sales Ltd.).*

CLAREMONT

The Country's Largest manufacturer of *Natural and Synthetic* ...

Flock

announces

a change of name from

Claremont Waste Manufacturing Co.

to

CLAREMONT FLOCK CORPORATION

CLAREMONT, NEW HAMPSHIRE

NEW, EXPANDED MANUFACTURING RESEARCH and LABORATORY FACILITIES

QUALITY CLAREMONT FLOCK

Over the years, the technological demands of industry have caused this company, in its development and expansion, to devote its operations exclusively to the conversion of cotton, rayon, nylon and other synthetic fibers into decorative and industrial flock. The new name, therefore, is logical and appropriate.

Personnel, policies, facilities and location remain unchanged. Our aim, as always, will be to strive continually for still better quality of product and service to the many customers and friends in the plastics, packaging, paper, rubber, textile and industrial finishing fields who have helped to make this company the country's largest producer of flock.

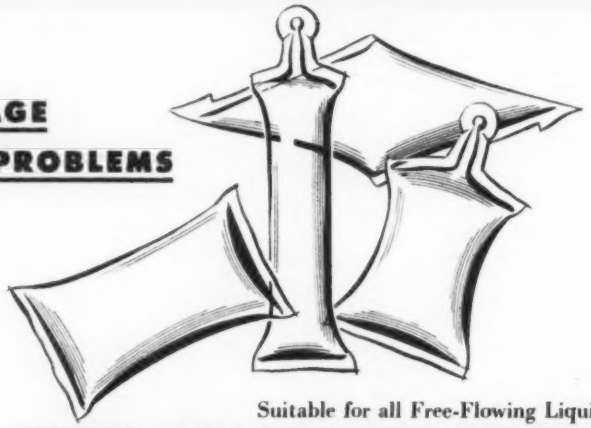
ONE-PIECE PLASTIC PACKAGE

SOLVES MERCHANDISING PROBLEMS

Fabulously successful in Europe.
Perfected for mass production here.

This non-breakable package
of specially compounded P.V.C.
is a complete low-cost unit.

Custom-filled in sizes up to 8 ozs.
and printed to specifications.



Suitable for all Free-Flowing Liquids in:

COSMETICS • FOODS • DETERGENTS • PHARMACEUTICALS

IF YOUR PROBLEM IS ANY OF THESE:

Sampling of New Product (easily enclosed with another product)
Introducing a New Size; or a Smaller Size
Item Safe and Suitable for Travel
Product Measured for One-Time-Use
Unbreakability or Transparency Important
Small, Attractive Package for Gift or Give-Away Purposes

Examples: Shampoos, Rinses, Bath Bubbles and Essences, Sunscreens, Cleansers, Fresheners, Colognes, Tinctures, Antiseptics, Mouth Washes, Balms, Lotions, Oils, Emulsions, Insect Repellents, Lubricants, Flavorings, Colorings, Food Dressings, Syrups.

Direct Inquiries to:

ANDREW M. MARTIN CO.

Westerly Road
Ossining, New York
Plants also in Montreal and Los Angeles

Already adopted by these outstanding Canadian companies: Lever Bros. Ltd.; Colgate-Palmolive Ltd.; Warner Lambert Canada Ltd.; Fuller Brush Ltd.; Familex Products Ltd.; W. T. Rawleigh Co. Ltd.

Plants and people

the appointment of **J. Wade Miller, Jr.**, as manager of its Central Services Div. Formerly manager of the Industrial Relations Dept., Mr. Miller will be in charge of advertising, industrial relations, marketing research, office services, public relations and purchasing. The position had been vacant since last April, when **Edward L. Mears** was named general manager of the firm's Container & Chemical Specialties Division.

The Polymer Chemicals Div. of **W. R. Grace & Co.**, New York, is now successfully producing Grex, the company's new high density polyethylene, at its new Baton Rouge, La., plant.

Thomas J. Craig has been appointed assistant general manager of the graphic-arts group of **Sun Chemical Corp.**, Long Island City, N. Y.

Craig

Warwick Wax Co., Inc., a Sun Chemical subsidiary, has purchased property adjacent to its Chanute, Kan., plant, for construction of additional facilities as part of the company's modernization and expansion program. One of Warwick's products which is expected to benefit from the additional equipment is Polymekon "W," a polymerized microcrystalline wax which is used by the packaging industry as an additive in wax coatings.

Fred Brombacher has joined **John Dusenbery Co.**, Verona, N. J., as head of technical sales and service for the company's new line of all-purpose laminating equipment.

Albert LaSalvia has been appointed sales representative in the East and Midwest for **The George H. Fry Co.**, Mineola, N. Y.

J. Frank Greeley, general manager of multiwall paper bag sales for **Fulton Bag & Cotton Mills**, New Orleans, has also been elected a vice president of the company.

Ralph R. Wyckoff has joined **A. J. Gerrard & Co.**, Melrose Park, Ill., as sales promotion manager.

Hercules Powder Co., Inc., Wilmington, Del., is now producing polypropylene commercially at its Parlin, N. J., plant, which has an expected annual capacity of 30,000,000 lbs.

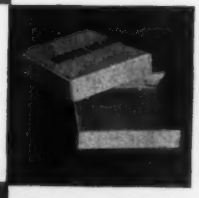
Owens-Corning Fiberglas Corp., Toledo, Ohio, is expanding its research and product and process development with the construction of a pioneering laboratory near Granville, N. J. The new plant will be used for long-range

UNIVERSAL BRIGHTWOOD BOX MACHINE

QUALITY boxes at lowest cost

In one automatic operation flat printed blanks become perfectly squared, solidly glued boxes for shoes, underwear, corsets, games, candy, etc. — boxes with turned-over ends and finished edges all around, made from double-walled or laminated blanks. Regular glued-end single wall boxes may also be made. A very wide size range can be produced on the one machine.

Write **US** for complete information.



PACKAGING MACHINERY MANUFACTURERS INSTITUTE PMMI MEMBER

U. S. AUTOMATIC BOX MACHINERY CO., INC.

122 ARBORETUM ROAD, ROSLINDALE, BOSTON 31, MASS.

Branch Offices: New York • Chicago • Springfield, Missouri
James C. Hale Co., Los Angeles, San Francisco • R. S. Gold, Toronto

ON ANY
PACKAGING MACHINE
there is a place where
IMS SILICONE
FLUID SPRAY

Anywhere Any Packaging Material Tends to Stick . . .

IMS SILICONE SPRAY will cut your scrap and stoppage rate—Save You Money! Try it on your packaging line—you'll see why almost overnight this amazing anti-stick material has become a necessity in the modern high-speed packaging field!

PRICES: $ 2.00 Per Sample Can
$ 18.00 Per Unbroken Dozen
$197.40 Per Unbroken Gross

Still lower prices on larger orders shipped in one gross lots on any schedule you request.

Delivered FREE Anywhere in the U. S. A.

INJECTION MOLDERS
SUPPLY COMPANY
3514 LEE ROAD • CLEVELAND 20, OHIO

Plants and people

projects for development in fields related to Fiberglas. **Games Slayter**, vice president, will be in charge. **Dr. L. P. Biefeld** has been named to the newly created post of technical assistant to the president.

Lowey

Joseph C. Lowey has been appointed director of sales and marketing for **W. C. Ritchie & Co.**, Chicago. Mr. Lowey will be responsible for national sales, product planning and development, merchandising and design. He will also be available for advice on packaging and marketing problems of the company.

The Dutch Brand Div. of **Johns-Manville Sales Corp.**, Chicago, has expanded its elastomeric adhesive production facilities and made them available to industry.

Morris Welch has joined **Melanie Kahane Associates, Inc.**, as director of industrial design.

Kiwi Coders Corp. has moved to larger quarters at 4027 N. Kedzie Ave., Chicago.

Paul A. Connolly has joined **Lippincott & Margulies, Inc.**, New York design firm, as account manager.

Goehring

Walter W. Goehring has been named manager of the manufacturing department of **F. J. Stokes Corp.**, Philadelphia. He was formerly with the Can Div. of Crown Cork & Seal Co., Inc., and prior to that he was general factory manager of SKF Industries, Inc.

Joseph F. Cullman, III, a director of **Milprint, Inc.**, of Milwaukee, has been elected president and chief executive officer of **Philip Morris, Inc.**, New York, Milprint's parent company.

Henry Salmaggi has been appointed assistant sales manager and **Charles J. Fillare**, sales promotion manager for **Mosstype Corp.**, Waldwick, N. J. **William H. Thys** has been named chief engineer for the company.

Jim Nash Associates, New York design firm, has established an independent corporation in Toronto to service Canadian accounts. **James Pilditch** has been appointed general manager.

Byron J. Anderson has been named manager of the polyethylene plant under construction at Houston, Tex., by Na-

[*Continued on page 166*]

products of progress in packaging
PLUS VALUES
mean
NIEMAND
INDUSTRIES
TUBULAR
PAPER PACKAGING

More attractively shaped—
more economical.

Stronger, more durable,
resists handling and
shipping damage.
Speeds up production.

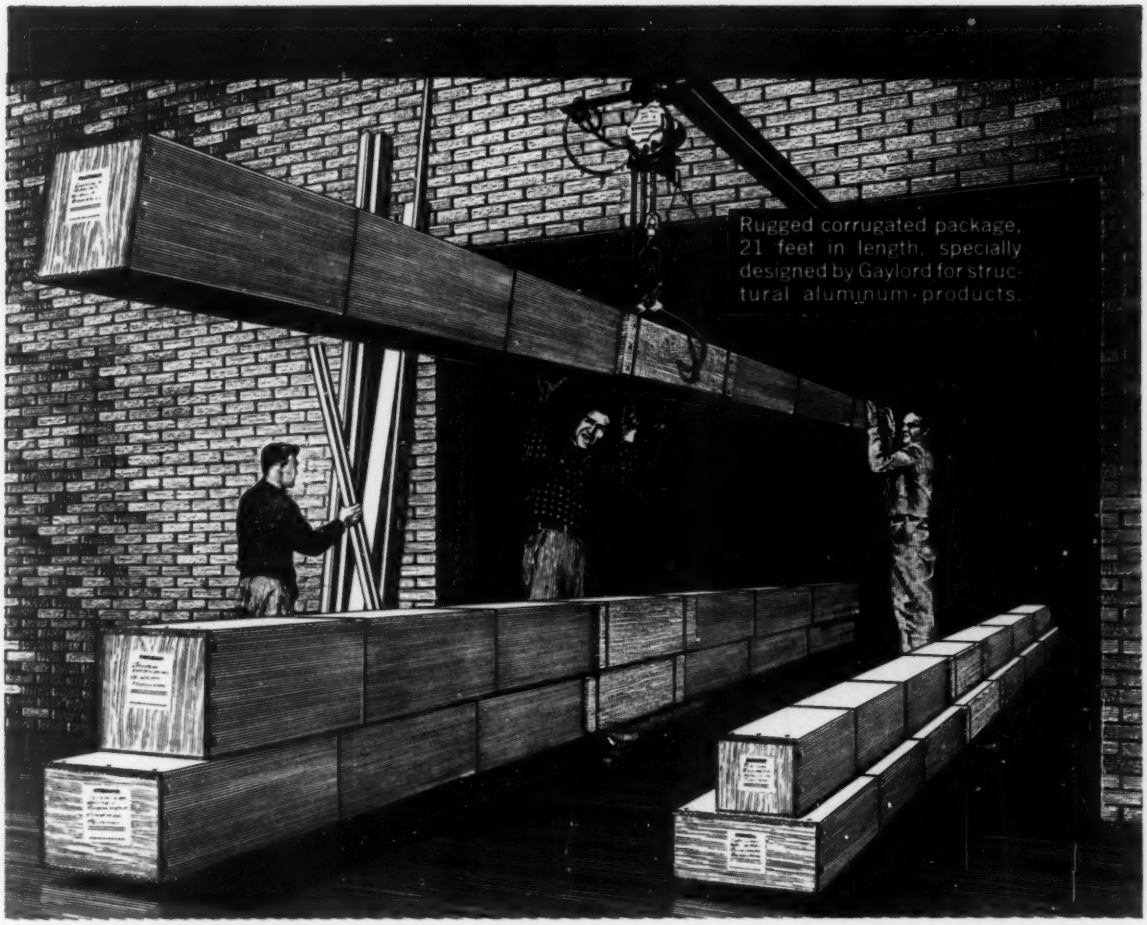
Handier for holding, opening,
pouring and shaking.
Plus simpler labeling and printing.

Easier tight sealing and
opening, with less weight
for comparable volume.

Simpler to fill,
handle and store.
Preserves products
in better condition.

Please write for detailed brochure.
We will be pleased to
recommend a package for
your line of products.

NIEMAND
INDUSTRIES, INC.
Manufacturers of Paper Tube Products
2502 TAYLORSVILLE RD.
Statesville, North Carolina



CHEAPER FOR THE "LONG HAUL"

Gaylord Boxes

For the long or short of it, whatever your packaging needs, put Gaylord engineering ingenuity to work for you.

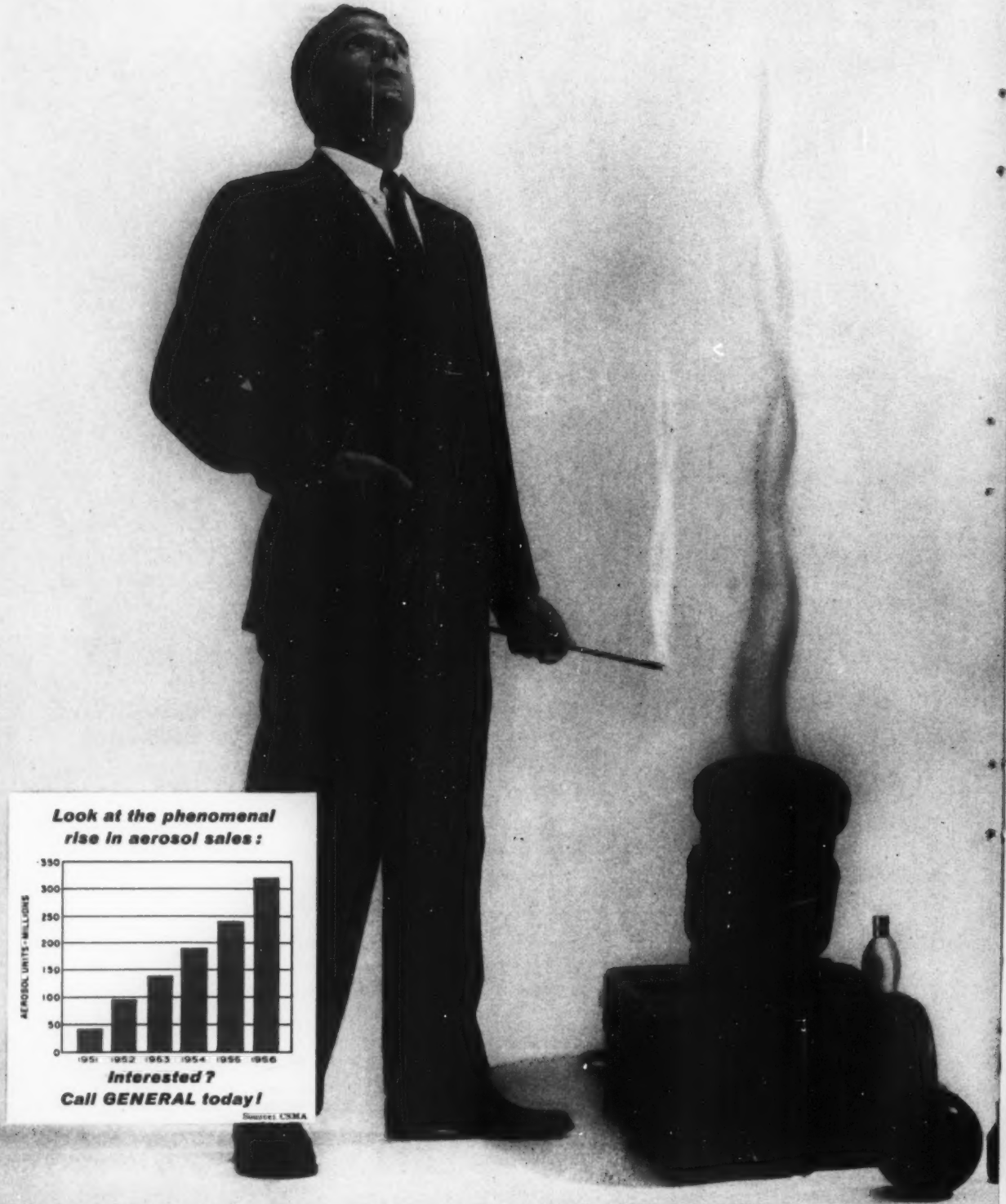
This manufacturer, for example, reduced costs three ways with Gaylord-designed corrugated shippers. Initial cost is lower than former packaging; one-step packing operation saves time; reduced tare weight saves shipping charges.

Call your nearby Gaylord engineer. He's backed by the finest packaging experience and research facilities in the industry.

CORRUGATED AND SOLID FIBRE BOXES • FOLDING CARTONS • KRAFT PAPER AND SPECIALTIES • KRAFT BAGS AND SACKS

GAYLORD CONTAINER CORPORATION ★ ST. LOUIS

AEROSOL



Look at the phenomenal rise in aerosol sales:

Interested?

Call GENERAL today!

Source: CSMA

PACKAGING

can start sales shooting straight up *for you!*

Had your eye on aerosols? Then you've seen sales shoot from 40 million units in 1951 to 320 million units in 1956. Aerosol sales have shown a steady increase of about 30% every year since '51!

Here's how *you* can get into this dynamic, high-profit field practically overnight—*without* heavy capital investment!

If your product can be sprayed, brushed on, dusted or daubed, it's a likely candidate for aerosol packaging. General Chemical will help you develop a formulation with the right pressures and compatibilities for your product and container. *No cost or obligation!* And there are many capable contract fillers throughout the country who will put up your product in aerosol form for test marketing, and handle commercial production afterwards. You do not have to invest in plant, special equipment or personnel to get into aerosols!

To arrange for a special presentation, write or call "Genetron" Department, General Chemical Division, Allied Chemical & Dye Corporation, 40 Rector Street, New York 6, N. Y.

genetron®
aerosol propellants

GC Allied Chemical

The Right Propellant for Every Aerosol Need!

Call on General for:

Free fact-packed technical manuals, market information

A complete aerosol research and development laboratory

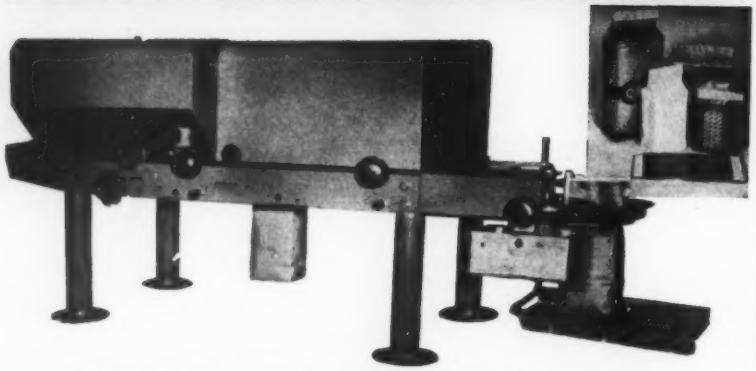
Data on many promising new types of aerosols

Field assistance with propellant storage, handling

GENERAL CHEMICAL DIVISION · Allied Chemical & Dye Corporation

40 Rector Street, N. Y. 6, N. Y.

SOMETHING REALLY **NEW**
IN A PAPER BAG CLOSING MACHINE
FRY CONTINUOUS MOTION BAG CLOSING MACHINE

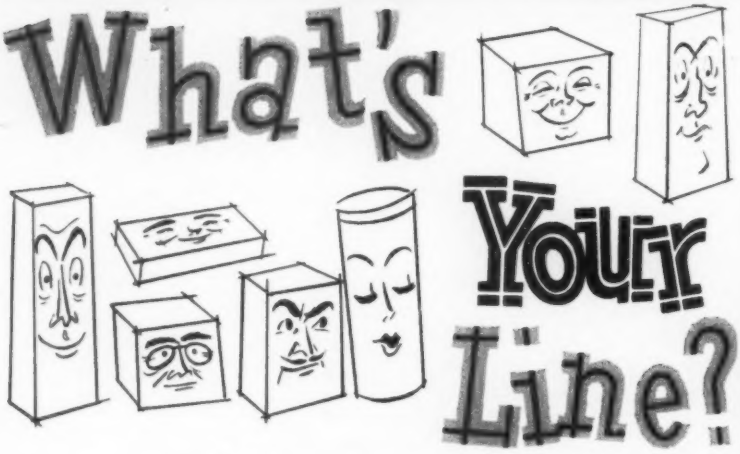


MODEL GS-54 — Continuous-Motion Bag Closing Machine double-folds, heat seals and/or Glues for sift-proof Closures.

Write for informative folder on this and other models. Please submit bag and product samples.

GEORGE H. **FRY** COMPANY
42 EAST SECOND ST. MINEOLA N.Y. LEE Pioneer 7-7230

What's Your Line?



Regardless of what you make . . . what your product is . . . packaging is most essential to attract impulse buying at point of sale. GUARANTEE the finest reproduction by specifying ACME GRAVURE CYLINDERS which are unequalled for foil, cellophane, plastics, paper and paper board products.

Your inquiry will receive immediate attention.

acme gravure services inc.

1501 West Congress Street Chicago 7, Illinois Phone: CHesapeake 3-1377

if it's Quality — if it's Delivery — it's **acme**

Plants and people

[*Continued from page 162*]

tional Petro-Chemicals Corp., Tuscola, Ill., a subsidiary of **U. S. Industrial Chemicals Co.** and the **Panhandle Eastern Pipeline Co.**

The second phase of the current program to modernize and expand facilities at Crossett Paper Mills will be activated immediately at a cost of somewhat more than $1 million, according to **The Crossett Co.**, Crossett, Ark. The 1958 program includes plans to modify the pulp-cooking process at the firm's bleached food board mill, provide greater storage facilities for hardwood pulp and increase capacity of chemical recovery equipment. With the changes, production is estimated to be increased by about 20 tons of food board per day.

The merger of **Technical Plastic Products** with **Colonial Applicator Co.**, both of Vineland, N. J., has been announced. Colonial manufactures droppers and dropper assemblies, cellophane packaging and other services, while Technical Plastics manufactures droppers and other items made of plastics. Heading the new organization, which will continue as Colonial Applicator Co., is **Mrs. Julia Lecardi,** widow of the late John Lecardi, Sr., founder of Colonial. Named as vice president and general sales manager is **Charles E. Schwab,** founder of Schwab Associates of New York and one of the founders of Technical Plastics. **John Lecardi, Jr.,** is secretary-general manager of the new firm and **Walter Sayell** is production manager and treasurer.

Marathon Corp., Menasha, Wis., plans to construct an addition to its Modesto, Calif., plant, to provide facilities for new waxed-paper manufacturing operations.

Melson

Robert Melson has been appointed manager of **Marathon Service Co.**, a Marathon Corp. subsidiary. **Ron Becker** has been promoted to supervisor of machinery service and **Earl Bublitz** to Western regional service supervisor. **Charles Bailar,** manager of Marathon Service Co. service engineers, has retired.

James B. Gergen has been named technical manager for the film products group of the industrial trades tape laboratory of **Minnesota Mining & Mfg. Co.**, St. Paul, Minn. **H. H. Mandell** has been promoted to Chicago branch sales supervisor for the retail trades tape division.

Vincent DeMaria has established a new firm, **Repro Design & Equipment Co.**, located at 1 E. Sunrise Hwy., Free-

port, N. Y., and has acquired the assets of **Hansen Printing Press Corp.** Repro Design has also been designated exclusive distributor for **Manhasset Machine Co.**'s flexographic presses and bag machines.

James L. Coffield, formerly sole owner and operator of **James L. Coffield Associates,** Chicago, has announced the appointment of **James H. Nolan** as a partner. The 20 - year - old company is a specialist in packaging problems in the paper and plastics field, representing such firms as **Shore Line Industries, Master Package Corp., Wabash Fibre Box Co.** and **Mullery Paper Package Corp.**

Coffield Nolan

The Pontiac Engraving & Electrotype Co., Chicago, has changed its name to **Pontiac Graphics Corp.** Corporate structure remains the same.

General Mills, Minneapolis, Minn., has announced the promotion of **H. H. Barton** to the position of advertising and promotion manager, household products marketing, Grocery Products Div.

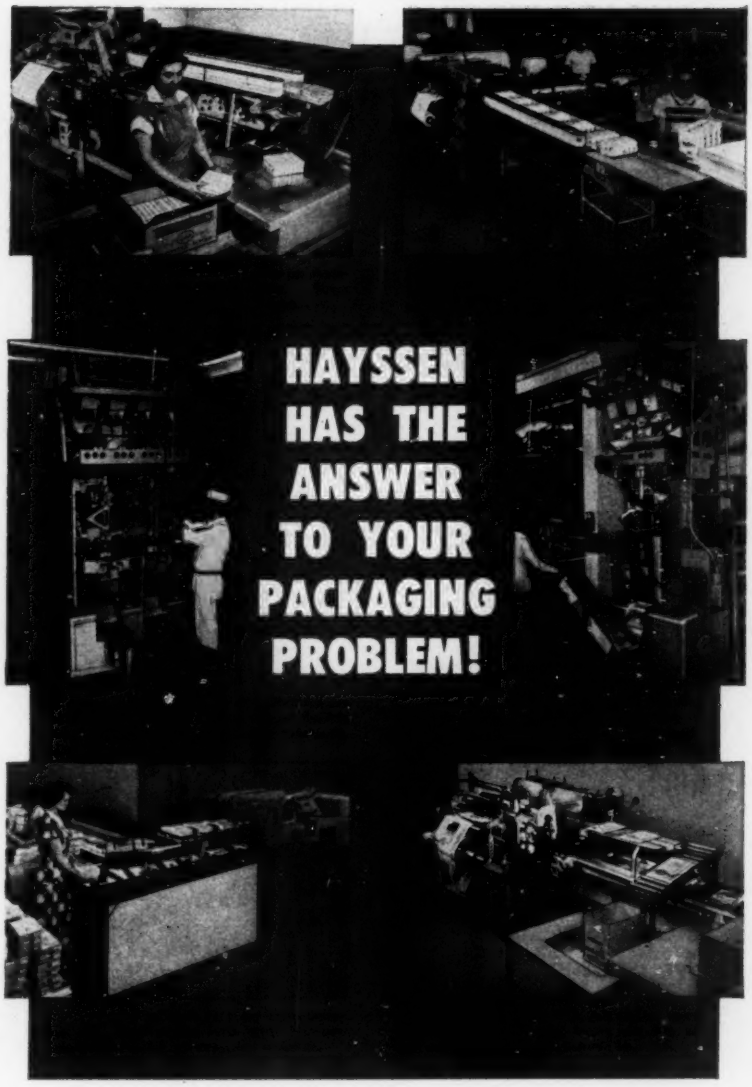
The California Ink Co., Inc., San Francisco, has opened a new two-story research center at Berkeley, Calif. The building houses eight self-contained laboratories for research in the fields of coatings and inks. **William C. Parle** is technical director in charge of the new facility.

A complete re-organization of the U. S. marketing, sales, advertising and merchandising divisions of **Max Factor,** Hollywood, Calif., has been announced. Under the new set-up the firm's Pharmaceutical and Specialty Division and the U. S. Cosmetics Division will be merged. **Alfred Firestein** has been appointed director of U. S. marketing, while **Chester Firestein** is now director of U. S. merchandising. **Lee Rosene** is director of U. S. sales and **Nelson Gross** has been named director of domestic advertising.

Thompson-Leeds Co., Inc., has opened larger new offices at 250 E. 51 St., New York, where it is offering a complete point-of-sale display, packaging and merchandising service.

Dr. Bruce H. Morgan has rejoined the Metal Research & Development Dept. of **Continental Can Co.,** New York, as senior food technologist. Dr. Morgan returns to Continental after four years with the Army Quartermaster Food & Container Institute, where he helped organize the Army project for preserving food by ionizing radiation.

Harry M. Shaw has been appointed Wichita, Kan., regional manager for **Richardson Scale Co.,** Clifton, N. J. **R. W. Bagnell** has been named district manager for the company's New



● Whatever your product, whatever your packaging problem, there's surely a machine in the long and versatile Hayssen line to satisfy your need. If not, we'll build one that will; and, we'll save you money, too!

Whether you require wrapping, bundling, banding, bagging or flexible packaging, Hayssen machines will do it better, run longer with less maintenance, are more versatile and efficient. They're *First* in *Automatic Packaging.*

Let our experienced packaging engineers help you with your packaging problems. Contact us TODAY!

HAYSSEN

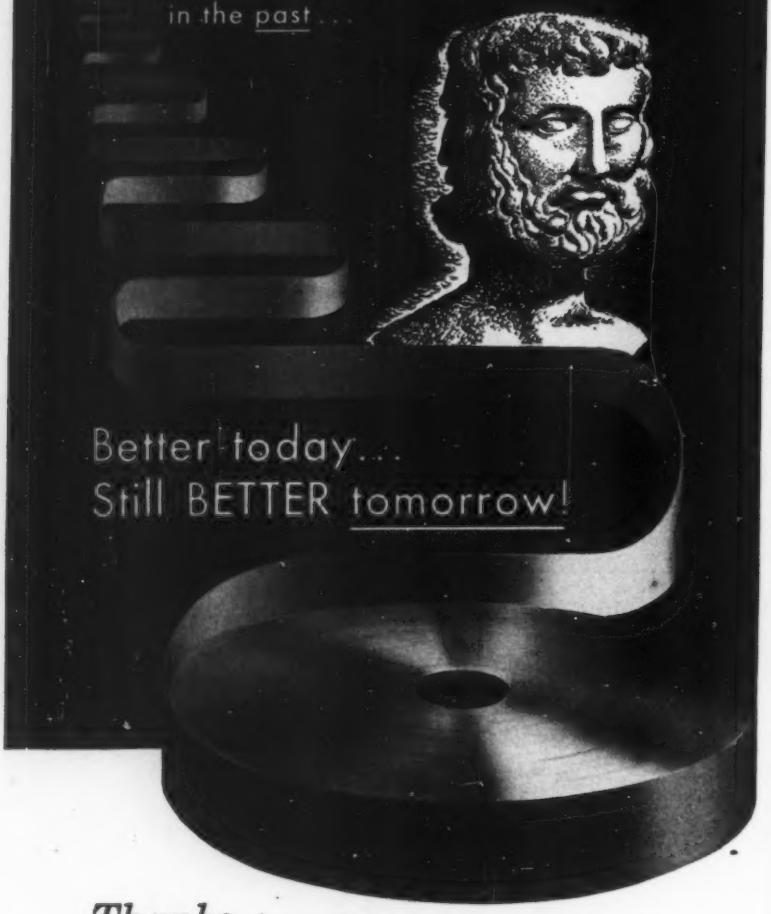
MANUFACTURING COMPANY • Dept. MP-1 • SHEBOYGAN, WIS.

first in Automatic Packaging Since 1910

Albany • Atlanta • Chicago • Dallas • Denver • Detroit • Houston • Jackson, Miss. • Kansas City
Los Angeles • Minneapolis • New York • Philadelphia • St. Louis • San Francisco • Montreal • Toronto

GUMMED TAPE WITH ANIMAL GLUE

The standard of excellence in the past...



Better today...
Still BETTER tomorrow!

Thanks, in part, to—

DARLING'S *Research for better glues*

DARLING'S *Technical Service, assisting the manufacturer of gummed tape*

IF you're stuck with a question on glue, ask us.

IF you have a packaging problem, see your gummed tape supplier.

DARLING'S improved BONE GLUE

DARLING & COMPANY
GLUE DIVISION
4201 South Ashland Avenue, Chicago 9, Illinois
Animal By-Products is Our Main Business

Plants and people

York-New Jersey district. The district office is now located at the company headquarters.

Richardson has opened a new sales office at 103 St. George Dr., Camillus, N. Y., and has appointed **Kenneth Kardux** as district manager.

St. Regis Paper Co., New York, has opened a multiwall packaging division sales office in Oklahoma City, Okla. **Bruce C. Kelly** is in charge.

Sinclair & Valentine Co., New York, has opened a new printing-ink manufacturing plant at Kalamazoo, Mich.

Kenneth G. Cooley has been elected senior vice president of **The S. K. Smith Co.**, Chicago.

Richard J. Kraus has been elected to the board of **John C. Stalfort & Sons, Inc.**, Baltimore, Md.

Francis M. Guiney and **William J. Conlon** have been assigned as sales engineers to the New York office of **Taylor Fibre Co.**, Norristown, Pa.

An electronic device that is said to guarantee uniformity of glue film on all M-J guaranteed flat gummed papers has been installed by the fine-papers division of **Ludlow Papers, Inc.**, Brookfield, Mass. The AccuRay beta gauge mechanism, a product of **Industrial Nucleonics, Inc.**, is expected to bring automatic glue-film control to all gumming operations.

Jack Wilson has been named general sales manager of **Max Ams Machine Co.**, Bridgeport, Conn. Mr. Wilson was formerly with American Can Co., Continental Can Co. and the Container Div. of Sherwin-Williams Co.

E. T. Logan has been appointed sales manager of **The Woodman Co.**, Decatur, Ga. **Robert V. Young** has been promoted to service manager and **Clyde Carrier** to manager of the parts department.

Walter S. Gay, sales representative for the Glass & Closure Div. of **Armstrong Cork Co.**, Lancaster, Pa., died on Nov. 10 at the age of 55.

C. W. Montgomery, 70, sales representative for **Miller Wrapping & Sealing Machine Co.**, Chicago, died on Nov. 4.

Archibald W. Paull, Sr., president of **Wheeling Stamping Co.**, Wheeling, W. Va., died last month in his 88th year. Mr. Paull had been president of the company since 1898, when he succeeded his father.

Guarding the Quality of our

BLEACHED SULPHATE BOARD

Our expert technical staff at St. Marys, Ga., works night and day, with virgin pulp, a modern chlorine dioxide bleach-plant, and a paper machine of the latest type, to maintain a product of highest possible brightness, purity and printing excellence.

We welcome inquiries for sanitary food boards, hot-and-cold drink cup stock, and linerboard, to be made to your own exacting specifications.

Gilman Paper Company

Most Quality Conscious Producer in the Industry

[illegible] FIFTH AVENUE, NEW YORK [illegible] N. Y.

DAILY NEWS BLDG., CHICAGO [illegible] ILL.

For your information

The Biltmore Hotel, New York, will be headquarters for the annual meeting of the **National Flexible Packaging Assn.**, to be held Jan. 14-16. Events scheduled include presentation of the 1957 Waste Survey Report, proposed improvements in the association's monthly reporting form, group sessions on specific products, including polyethylene and cellophane products, and an organization meeting of the Technical Committee. The annual banquet, to be held on Wednesday, Jan. 15, will have S. J. White of Cities Service Corp. as guest speaker.

The annual meeting of the **Laminated Foil Mfrs. Assn.** has been scheduled for Tuesday, Feb. 18, at the Yale Club, New York. A regular meeting of the association was held recently, at which **Kaiser Aluminum & Chemical Sales, Inc.**, was welcomed as a new member. **Kenneth M. Greenwell** of Reynolds Metals Co., luncheon speaker at that meeting, had as his subject, "Printing on Foil."

Registration is now open for the 7th **Annual Package Design Seminar** at New York University, Washington Square, New York, under the direction of **Robert I. Goldberg**, packaging-design consultant and director of Associated Industrial Designers. Beginning Feb. 5 and continuing for 14 successive Wednesdays, from 8 to 10 p.m., the series is planned as a comprehensive packaging and marketing seminar for business executives, purchasing agents, suppliers, agency personnel and designers. Lecturers will include: **Pearl Hagens**, senior editor of MODERN PACKAGING; **Jim Nash**, president of the Package Designers Council; designers **Egmont Arens** and **Frank Gianninoto**; **Dr. Myron Helfgott**, Package Research Institute; **Dr. Vincent Machi** and **Raymond Berlan** of Alfred Politz Research; **Willard F. Deveneau**, Federal Paper Board Co., Inc.; **Shy Rosen**, Milprint, Inc.; **Richard L. Cheney**, Glass Container Mfrs. Institute; **M. G. Kaufman**, plastics expert, and **Samuel Krebs** of Copeland Displays. Additional information may be obtained from the Div. of General Education, New York University, 1 Washington Sq. N., N.Y.

The **Glass Containers Mfrs. Institute**, New York, has announced the appointment of **Bush Barnum** as advertising and public-information director. Mr. Barnum has been with the Institute since 1954.

The **Western Packaging Assn.** has inaugurated a new personnel service for manufacturers in the packaging and allied fields seeking employees with specialized abilities. **Herbert King**, retired former executive of King & Anderson, will head up a Personnel Service Committee of seven Western packaging executives. Committee members are: **Alexander Donald** of King Sales & Engineering Co. and a San Francisco association director; **Fred Todt** of Fred Todt Co., a past president of the association; **Leo P. Blank** of Stecher-Traung Lithograph Corp., also a past president; **Edward H. Look** of Portco Corp., and **Spencer Tilden** of The Arabol Mfg. Co. There will be no charge for the service at present either to companies or employees. Inquiries from both employers and applicants should be addressed to Herbert King, Personnel Service Committee, Western Packaging Assn., 441 Folsom St., San Francisco 5.

Robert E. O'Connor was formally appointed executive secretary of the **American Paper and Pulp Assn.** He succeeds the late **E. W. Tinker.**

The **Lithographers National Assn.** has announced Jan. 10 as the closing date for entries in its **Eighth Lithographic Awards Competition** for 1958. Winners in the event will be exhibited during the 53rd annual convention of the association, to be held April 28-May 1, Arizona Biltmore Hotel, Phoenix, Ariz., and at the Architectural League, 115 E. 40 St., New York, June 9-13. Awards will be made in 48 major classifications, including Labels, Wrappers, Cartons, Point-of-Purchase Material and Miscellaneous Packaging Materials. Entry blanks may be obtained on request to the Lithographers National Assn., 381 Fourth Ave., New York 16, or at LNA's office at 127 N. Dearborn St., Chicago 2.

More than 90 persons attended the recent **Chicago Section TAPPI** dinner meeting, the last one in 1957. **Adam A. Dembicki** of Container Corp. of America, acted as chairman and moderator. The meeting was devoted to the problems and developments in inks for printing on corrugated and folding cartons, highlighted with a talk by **O. C. Holland** of the Interchemical Corp., on "The Magic of Color."

The Jan. 7 meeting of this group featured a three-man panel discussion on polyethylene-wax melt coatings for paper and paperboard. **Dr. J. S. Barton**, Western-Waxide Div., Crown-Zellerbach Corp., spoke on the converter's viewpoint; **Glen Peacock**, Bakelite Development Laboratories, Bakelite Corp., discussed new developments in polyethylene wax blends, and **Robert Rosenbaum**, Technical Service Laboratory, Semet-Solvay Petrochemical Div., Allied Chemical & Dye Corp., surveyed the fields in which low-molecular-weight polyethylene is useful for wax blending.

Jules Pinsky, chief physicist of Plax Corp., has been named to serve on the subcommittee on subsistence packaging on the **Committee on Containers** of the **Advisory Board on Quartermaster Research and Development.** The subcommittee is charged with reviewing and evaluating research and development projects in subsistence packaging, operating under the National Academy of Sciences, National Research Council.

New officers for the 1957-58 term were elected at the recent annual fall meeting in Chicago of **Label Mfrs. National Assn., Inc.** The new officers are: president—**Clifton B. Batchelder** of Epsen Lithographing Co.; vice president—**Ralph J. Wrenn** of Stecher-Traung Lithograph Corp.; treasurer—**Lorenz L. Schmidt** of Schmidt Lithograph Co. New members of the board of directors include: **Robert G. Griffin** of Courier-Journal Lithographing Co.; **James L. Murphy** of Consolidated Lithographing

What's doing

Jan. 13-14—**Super Market Institute, Inc.**, non-foods business conference, Conrad Hilton Hotel, Chicago.

Jan. 14-16—**National Flexible Packaging Assn.**, annual meeting, Biltmore Hotel, New York.

Jan. 16-23—**28th National Housewares Exhibit**, Chicago.

Jan. 18-22—**Canning Machinery & Supplies Assn.**, 51st annual exhibit, Convention Hall, Atlantic City, N.J.

Jan. 21—**National Canners Assn.**, annual convention, Atlantic City, N.J.

Jan. 22-26—**Potato Chip Institute**, annual convention, Hollywood, Fla.

Jan. 27-30—**Plant Maintenance & Engineering Conference & Show**, International Amphitheatre and Palmer House, Chicago.

Jan. 28-31—**Society of Plastics Engineers**, annual technical conference, Sheraton Cadillac Hotel, Detroit.

Feb. 2-4—**National Wooden Pallet Mfrs. Assn.**, semi-annual meeting, Hollywood Beach Hotel, Hollywood, Fla.

Feb. 3-14—**Industrial Packaging Short Course**, Purdue University, Lafayette, Ind.

Feb. 4-6—**Society of the Plastics Industry**, 13th Reinforced Plastics Div. Conference, Edgewater Beach Hotel, Chicago.

Feb. 18—**Laminated Foil Mfrs. Assn.**, annual meeting, Yale Club, New York.

Feb. 18—**Rochester Society for Quality Control**, 14th annual quality-control clinic, War Memorial, Rochester, N.Y.

Chocolate
Coffee
Tea
Toppings
Catsup
Syrups

Wonderful way to Package

...for any liquid or semi-liquid product -Precision's new valve and spout

Flavorings
Bitters
Tabasco
Sweeteners
Ethical Pharmaceuticals
Antibiotics
Prescription Dispensing
Vitamins
Nose Drops
Eye Drops
Liquid Makeups

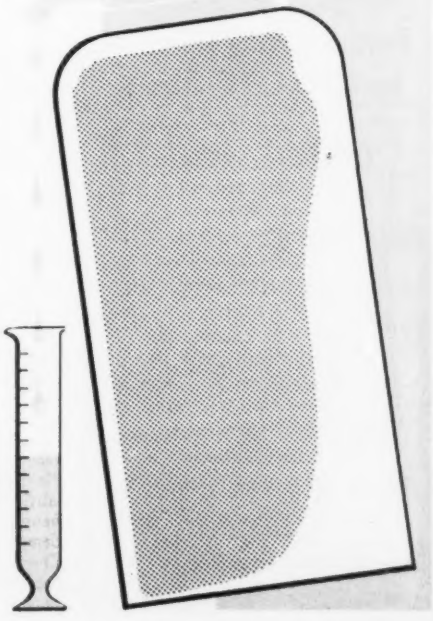
Waxes
Cleaners
Detergents
Hand Lotions
Dental Creams
Hair Dressings
Shampoos
Shaving Soaps

NON-AERATED LIQUID STREAM

A STREAM DISPENSER that operates at the touch of a finger. It's non-aerated and it maintains an hermetic seal on the container contents. Normally reactive, volatile or oxidizable products can be kept for long periods of time without refrigeration . . . kept exactly as they were packaged. This makes an ideal container for foods, toiletries and household helps. Ideal because it is an eye-appealing, easy to use package that has proven sales motivation.

DROPS MEASURED TO SIZE

A DROP DISPENSER that works with "push button" ease to give a predetermined drop size, exact enough to dispense drugs or vitamins. An ideal dispenser of volatile products, many medicinals or vitamins and extracts. The inert propellant does not effect the contents either physically or chemically. Precision's engineers will be most happy to discuss your product problems . . . a letter will bring you complete details. Why not write today!



PRECISION

PRECISION VALVE CORPORATION
700 Nepperhan Avenue, Yonkers, N. Y.

HOW TO MAKE
A GOOD PRODUCT
BETTER
...with CREATIVE MOLDING by
DILLON-BECK
Specialists in
Custom Molding
and Plastic Packaging

ROGER & GALLET
NEW / SWIVEL / STICK /
LipAde

First
Aid for
Sore Lips
PRIMED
FOR
SOARING
SALES...

...with an ingenious molded plastic swivel stick, a threaded pin and cup that propels and repels the pomade... easy to use... easier to sell...

Designed, Molded and
Produced to Perfection
by DILLON-BECK

COMPLETE FACILITIES
for creating, designing,
and producing
"something special"
in injection molding
and packaging.
★ DESIGNS & MODELS
★ MOLD & DIE CONSTRUCTION
★ MOLDING & ASSEMBLY of
THERMOPLASTICS
RANGING FROM 1 to 16 OZ.

Inquiries Invited
DILLON-BECK Manufacturing Co.
Designers • Molders of Plastic Products
1227 CENTRAL AVENUE
HILLSIDE, NEW JERSEY

For your Information

Corp.; T. C. Nevins, Sr., of The Nevins Co., and Mr. Wrenn. John A. Bresnahan continues as general counsel.

Theme of the 14th Annual Technical Conference of the Society of Plastics Engineers, scheduled for Jan. 28-31 at the Sheraton Cadillac Hotel, Detroit, is "Progress Through Plastics Engineering." More than 100 papers covering recent developments, methods, materials and techniques in the plastics field will be presented.

The 11th semi-annual meeting of the National Wooden Pallet Mfrs. Assn. will be held Feb. 2-4 at the Hollywood Beach Hotel, Hollywood, Fla. At the meeting the association will announce procedures to be followed under NWPMA-approved tests for evaluating pallets. Non-members are invited to the meeting, but must write to National Wooden Pallet Mfrs. Assn., 609 Barr Bldg., Washington 6, D. C., for invitations.

The 44th annual meeting of the Chemical Specialties Mfrs. Assn. on Dec. 9 featured technical sessions devoted to discussion of how to provide new and better chemical products for home and industry. The association is offering transcripts of technical papers and committee reports given at its 43rd mid-year meeting in Chicago last May. Proceedings are available from the association at $7.50 per copy in the U.S. and Canada, $8 elsewhere. Write Chemical Specialties Mfrs. Assn., 50 E. 41 St., New York 17.

The Defense Department has announced that four firms in the food and related industries—**Armour & Co., Continental Can Co., Food Machinery & Chemical Corp.** and **General Foods Corp.**—have joined with the Army Quartermaster Corps in setting up the world's first food radiation center. The four companies are to work closely with the Army in an effort to develop a method for preserving foodstuffs by subjecting them to different types of nuclear emanations. **Irradiated Products, Inc.** (IPI), an independent industry group formed by the four companies, will conduct the production planning and operation of the new facility, which has been designated the U. S. Army Ionizing Radiation Center (USAIRC) under a contract awarded by the Quartermaster Corps. The Center will be built at Sharpe General Depot, Lathrop, Calif. IPI officers are: president—**Udell C. Young** of General Foods; vice president—**Victor Conquest** of Armour; secretary—**Arno M. Wiese** of General Foods; treasurer—**John N. Carty** of Continental Can.

At a recent business meeting in Oakland of the **Northern California Chapter** of the **Society of Industrial Packaging & Materials Handling Engineers** the following officers were elected: president—**W. C. G. Brouwers** of Insurance Co. of North America; vice presidents—**R. W. Stevens** of Fibreboard Paper Products Corp., **G. P. Heppes** of Portco Corp., **D. A. Timmerman** of Zellerbach Paper Co. and **W. L. Dalton** of Container Laboratories, Inc.; secretary-treasurer—**E. G. Covington** of Wooden Box Institute.

The Paraffined Carton Research Council, 111 W. Washington St., Chicago 2, has developed an illustrated poster showing the 14 points of good handling of ice cream, butter, margarine and lard cartons for use on walls of receiving rooms, warehouses and packaging departments. Each of the 14 "dos and don'ts" is illustrated with cartoons. Free posters are available from PCRC member companies.

The **Chamber of Commerce of the United States** has listed 350 legal holidays, religious observances and business-promotion events in its 1958 edition of "Special Days, Weeks and Months." Special days and weeks in each month are chronologically listed to permit advance planning of promotional events. Names and addresses of sponsors and the purpose of each event also are listed. Copies may be ordered from the Domestic Distribution Dept., Chamber of Commerce of the United States, 1615 H St., N.W., Washington 6, D. C. Prices are 50 cents each for one to nine copies; 10 to 99 copies, 35 cents each; 100 to 999 copies, 25 cents, and 1,000 or more copies, 20 cents each.

Marvin Krakow of Micron Plastics Corp., 640 Dean St., Brooklyn 38, N.Y., has announced the formation of **The National Film Extruders Assn., Inc.** Mr. Krakow is secretary of the group. Other participating companies are: **Extrudo-Film Corp.; W. Ralston & Co.; Plastic Horizons, Inc.; Andmar Plastics, Inc.; Metropolitan Plastics Corp.; Cee-Jay Extruders, Inc.,** and **Globe Extruders, Inc.**

The Purdue University Industrial Packaging Short Course is scheduled for Feb. 3-14, offering two weeks of training for supervisors and men working in packaging, packing, shipping, traffic, purchasing, sales or testing and technical departments. The following areas of instruction are included: engineering principles, degradation and deterioration, materials and equipment, packaging technology, types and uses of containers, material handling and warehousing, and management and cost

reduction. Registration fee is $100. Additional information is available from K. E. Glancy, Conference Dept., Purdue University, Lafayette, Ind.

The **German-American Trade Promotion Office**, Suite 6900, 350 Fifth Ave., New York 1, has announced the availability of the "Export Yearbook of the Packing and Filling Machine Industry in West Germany." The book is presented in English, Spanish, French and German.

The **National Paperboard Assn.** has announced the re-election of **J. R. Kennedy**, president of Federal Paperboard Co., as association president. **Stuart G. Olsson** of Chesapeake Corp. of Virginia and **H. L. Wollenberg** of Longview Fibre Co. have been re-elected vice presidents.

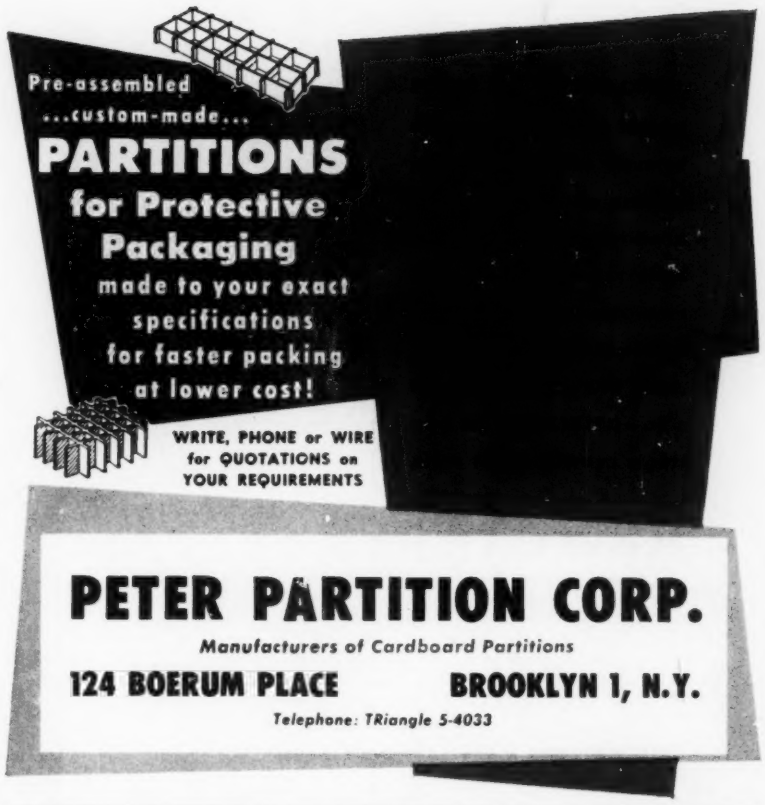
The **Research and Engineering Council of the Graphic Arts Industry, Inc.**, 5728 Connecticut Ave., N. W., Washington 15, D. C., has published a report titled "Lighting for Color Appraisal in Graphic Arts." The report is intended to help reduce the misunderstandings and much of the time and effort frequency wasted when evaluating colors under different light sources.

The **Point-of-Purchase Advertising Institute** presented its first national workshop, "Guideposts to More Productive Merchandising," on Dec. 5 in New York. The session was designed to present the latest information on ways to improve the productiveness of merchandising activities, with special attention on the expanding role of point-of-purchase. Speakers included: **Lester Gallagher** of Ketchum, MacLeod & Grove, Inc.; **Findley Williams** of Sears, Roebuck & Co.; **A. R. Menzies** of Chicago Cardboard Co.; **Philip G. Corby** of The Psychological Corp., and **Stanley T. Frame** of National Biscuit Co.

The **Society of Industrial Packaging & Materials Handling Engineers** will hold its 1958 **National Packaging & Handling Exposition** Oct. 14-16 at the Chicago Coliseum. The announcement was made on the final day of the 1957 exposition by the society's chairman of the board, **John W. Reynolds** of Kraft Foods Co. Information on this year's meeting is available from **Hanson & Shea, Inc.**, 1 Gateway Center, Pittsburgh 22, Pa.

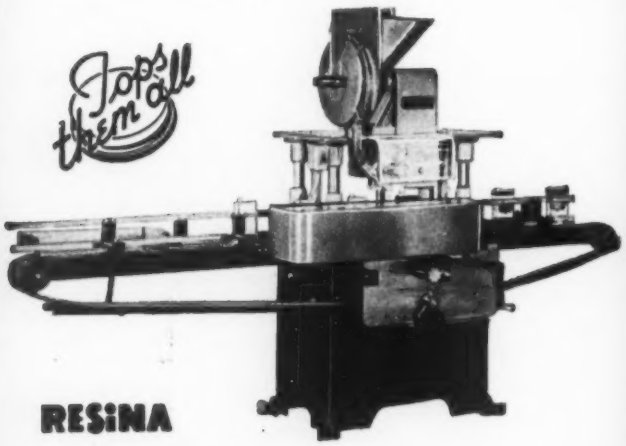
The marketing session of the **National Canners Assn.** convention, to be held Jan. 21 in Atlantic City, will feature addresses by **Esther Foley** of Macfadden Publications, **Arthur C. Nielsen, Jr.**, of A. C. Nielsen Co. and **Commander Edward Whitehead** of Schweppes U. S. and Canada, Ltd.

The **Rochester Society for Quality Control** has announced the **14th Annual Quality Control Clinic** to be held Feb. 18 at War Memorial, Rochester, N. Y. The clinic committee has arranged for the presentation of 20 tech-


Pre-assembled
...custom-made...
PARTITIONS
for Protective Packaging
made to your exact specifications for faster packing at lower cost!
WRITE, PHONE or WIRE for QUOTATIONS on YOUR REQUIREMENTS
PETER PARTITION CORP.
Manufacturers of Cardboard Partitions
124 BOERUM PLACE BROOKLYN 1, N.Y.
Telephone: TRiangle 5-4033

DAVIDSON DUAL-LITH
245
solves imprinting, numbering problems
DAVIDSON DUAL-LITH does more for you on one machine
DAVIDSON CORPORATION
A Subsidiary of Mergenthaler Linotype Company
29 RYERSON STREET, BROOKLYN 5, NEW YORK
Distributors in all principal cities and Canada
Model 245 equipped with new continuous load feeder and mechanical jogger
DAVIDSON CORPORATION, 29 Ryerson St., B'klyn 5, N.Y.
Send Questions & Answers book
Send "Numbering" bulletin
Name
Firm
Street
City Zone State
MP-1-6
Headings in Protype • Text in Linotype

DAVIDSON DUAL-LITH Model 245 is one of the most popular small offset machines in the imprinting and numbering field today. This versatile machine imprints and numbers cartons, envelopes, booklets, cards and heavy stock. It is also ideal for quality offset reproduction of catalog pages, bulletins, folders, direct mail — even pieces of odd shapes and sizes. Model 245 imprints by three methods: Linotype slugs, rubber plates or presensitized offset plates. It also produces bank note quality numbering, plus perforating! You get close register and alignment because Davidson's patented gripper bar chain delivery has positive control over every sheet, from impression to delivery. Ask for "Questions & Answers" booklet and Bulletin on "Numbering" ... use the handy coupon.

RESINA
CAPPERS
a model for every purpose . . . a speed for every need!
NEW! INNERSEALER
Tops them all

RESINA
Automatic innerseal machine for selecting and applying standard innerseals to various types and sizes of tin cans as commonly used in the oil industry.
Capacity: 60-120 per minute
Seals from ⅞" to 1½".
AND SPECIAL MACHINERY
Agents in principal cities throughout the United States and Canada.
Write for descriptive literature
RESINA
AUTOMATIC MACHINERY CO., INC.
Brooklyn 31, New York

For your information

nical papers on quality control and industrial statistics. Additional information is available from **Edward F. Winterkorn**, Program Planning Chairman, Eastman Kodak Co., Navy Ordnance Div., 50 Main St. W., Rochester 14, N. Y.

The following were elected as officers for 1958 at the second annual meeting of the **Upper Ohio Valley Chapter** of the **Industrial Designers' Institute**: chairman—**Leon Gordon Miller**, independent designer; vice chairman and treasurer—**Wilbur Riddle**, Hazel-Atlas Glass Div., Continental Can Co.; treasurer—**Don Schreckengost**, Homer Laughlin China Co.

A new $300,000 pulp and paper laboratory bearing the name of **Reuben B. Robertson** of The Champion Paper & Fibre Co. has been dedicated on the North Carolina State College campus. The dedication was preceded by the annual joint meeting of three advisory committees to the college's school of forestry: the Wood Products Laboratory Advisory Committee, the Forest Management Advisory Committee and directors of the Pulp and Paper Foundation.

Exhibit space is now available for the 1958 **Western Material Handling Show** to be held May 8-10 at the Great Western Exhibit Center, Los Angeles. Complete information and details are available from the Material Handling Show, Inc., 2807 Sunset Blvd., Los Angeles 26.

R. T. Meyer, president of Tape, Inc., was unanimously elected president of **The Gummed Industries Assn., Inc.**, at the recent annual meeting of the association in White Sulphur Springs, W. Va. **William L. Shattuck** of The Adhesive Products, Inc., is the new vice president and **Philip O. Deitsch** was again named managing director. Newly elected members of the board of directors include: **A. W. Aron** of Hudson Pulp & Paper Corp.; **Roth F. Herrlinger**, The Gummed Products Co.; **Fred Rothschild**, General Gummed Products, Inc.; **Henry W. Stark, Jr.**, Rexford Paper Co.; **A. J. Thiel**, Ludlow Papers, Inc.; **S. E. Thompson**, Central Paper Co., and **R. J. Wesley**, Mid-States Gummed Paper Co. The association's spring meeting will be held in April at the Eden Roc Hotel, Miami Beach, Fla.

A 20-minute filmstrip describing the profit potential of canned beer merchandising is available to brewers and food retailing groups. The film is sponsored by **Container Corp. of America** and was produced by The William Gottlieb Co. Bookings are being handled by Container Corp.'s New York, Chicago and San Francisco offices.

Craftsmanship

AN INTEGRAL PART OF THE CONTAINER WHEN MARYLAND GLASS TAKES OVER YOUR DESIGN PROBLEM!

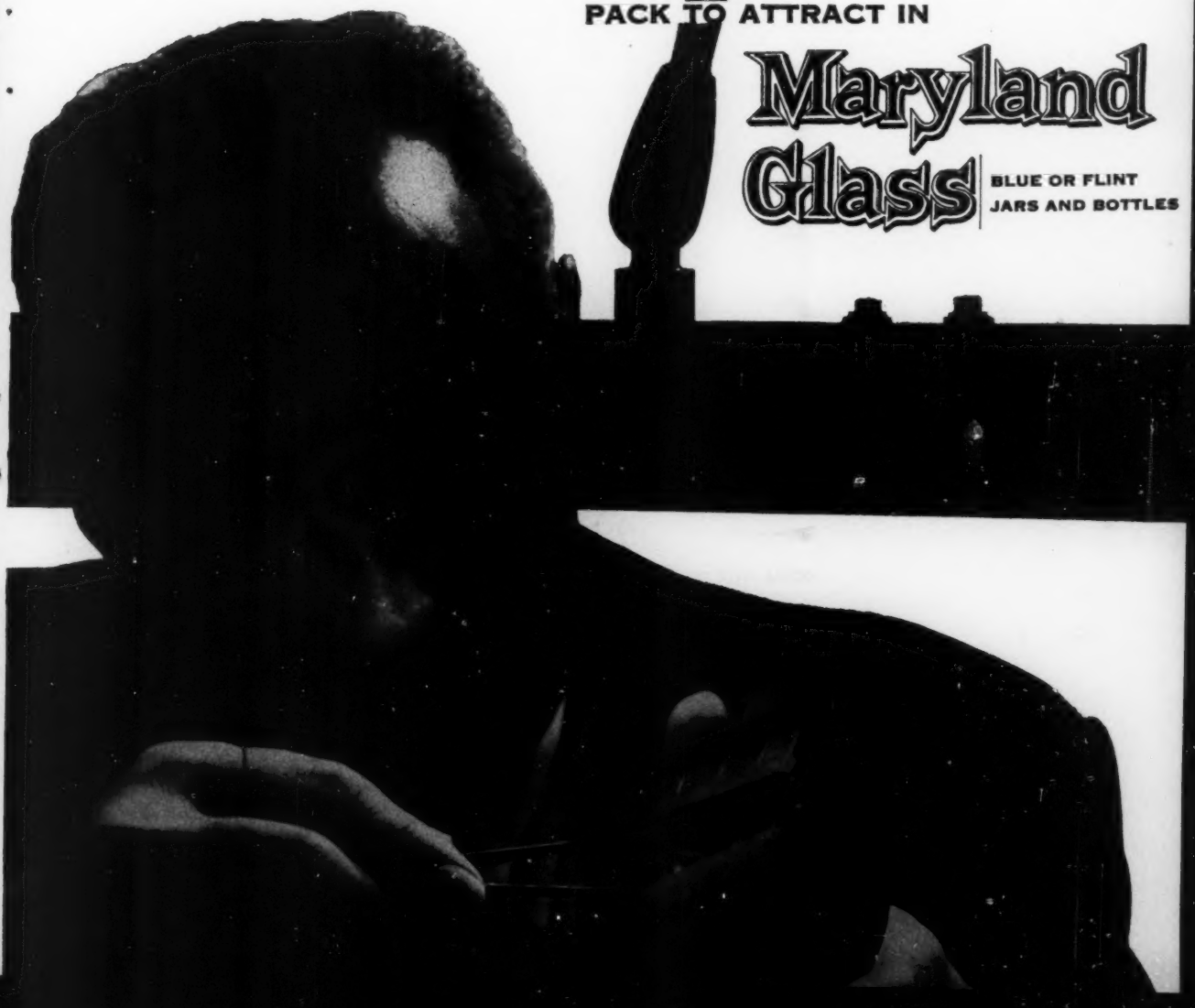
When you drop a packaging problem in our lap, the end result is more than a glass container. It is an *idea* . . . born of restless imagination, shaped by skilled hands, backed by years of sound experience. Our creative staff gives you a selling package that packs well, ships well and pushes your product on the shelf. For a successful solution to your design problem, contact MARYLAND GLASS CORPORATION, 2147-53 Wicomico St., Baltimore 30, Md.

STOCK DESIGNS
—A variety in blue or flint glass and a complete range of sizes is ready for immediate shipment.

PACK TO ATTRACT IN

Maryland Glass

BLUE OR FLINT JARS AND BOTTLES



U. S. patents digest

This digest includes each month the more important patents of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at 25 cents each in currency, money order or certified check; postage stamps not accepted. Edited by H. A. Levey.

Double-Wall Container, Joseph Casalino (to Plastic Molded Arts Corp., Long Island City, N.Y., a corporation of New York). U.S. 2,808,090, Oct. 1. A receptacle comprising an outer member embodying a side wall, a bottom and a top opening, an inner cup member and an interlocking coupling between said members comprising a circular elastic flange carried by one member and a circular locking groove in the other member into which said flange is insertable by reason of its elasticity and in which the flange is tightly engaged.

Frozen-Food Shipping Container, Martin J. Gilman, Gilman, Conn. U.S. 2,808,093, Oct. 1. A frozen-food insulated container comprising an inner container formed of spaced walls, insulating material disposed between the spaced walls, an outer wall formed of flexible material and stitched to the outer spaced wall of the inner container, a rigid base member, an insulated cover for said inner container and an outer cover.

Collapsible Multiple-Compartmented Carton, Kenneth T. Buttery, Kalamazoo, Mich. (to Sutherland Paper Co., Kalamazoo, Mich.). U.S. 2,808,177, Oct. 1. A collapsible carrier formed of an integral cut and scored blank, the carrier comprising three compartments adjustable when erected to a side-by-side angular relation or zigzag nested relation.

Combination Dispensing and Closure Device, Raymond J. Olson, et al. (to Federal Tool Corp., Chicago, a corporation of Illinois). U.S. 2,808,183, Oct. 1. A fluid dispenser and closure for a container having an outwardly extending discharge neck comprising a cup-shaped cap having a relatively thin, resiliently flexible diaphragm-like outer end wall closing the top of said cap, said cap being adapted to be fitted in inverted fashion over the outer end of said neck.

Closure for Collapsible Tubes and the Like, John Vanko, Brunswick, Ohio. U.S. 2,808,184, Oct. 1. In a closure, a body having a bore therein terminating in a shoulder, a felt washer seated on said shoulder, a plug frictionally secured in said bore and bearing on said washer and a closure having an inlet opening therein.

Closure for Collapsible Tubes, Franklin Lippincott Kates, Mount Holly, N.J. U.S. 2,808,186, Oct. 1. A closure for collapsible tubes, comprising a cap for assembly as a component part of a collapsible tube, said cap having a radial slot in its top opening through the perimeter of said cap at one end, a valve of flexible material slidably mounted in said slot and a stop member depending from the bottom of said valve in the form of a shoulder and a bottom inclined surface.

Packing Material for Fragile Articles, Philip M. Williams (to Keyes Fibre Co., Portland, Me., a corporation of Maine). U.S. 2,808,189, Oct. 1. A packaging arrangement comprising a generally tubular carton, a pair of packing flats defining a contiguous tubular contour within the confines of said tubular carton (each end-wall section supporting a series of annular abutment rings integrally formed therein) and each said floored supporting section comprising a plurality of half-moon depressions oriented in spaced, axially aligned relationship in side-by-side rows, with each row being in axial alignment with an abutment ring.

Heavy-Duty Telescopic Container, Fred R. Buhrmaster, et al. (to Crown Zellerbach Corp., San Francisco, Calif., a corporation of Nevada). U.S. 2,808,190, Oct. 1. A rectangularly shaped container formed of substantially similar inner and outer fully telescoped sections, each closed at one end by closure flaps and a substantially U-shaped reinforcing member positioned within said inner section.

Food Container, John T. Raisin (to John T. Raisin Corp., San Francisco, Calif., a corporation of California). U.S. 2,808,192, Oct. 1. A leakproof food container comprising a polygonal box folded to shape from a unitary three-ply blank and having an inner ply of thin metallic foil, a middle ply of cardboard backing and a thin outer ply of thermoplastic resin.

Tamper-Proof Closures for Containers, Winfield F. Smith (to Owens-Illinois Glass Co., a corporation of Ohio). U.S. 2,808,954, Oct. 8. A closure comprising a cup-like hood formed of a rubber-like material and including a circular top portion, an annular flange, a light-gauge sheet-metal shell within which said hood is nested, an annular skirt depending from the margin on the panel, a hollow axially collapsible annular bead projecting radially inward toward the flange of said hood and an annular series of external ribs formed on the hood flange.

Dispensing Caps for Containers, Peter G. See, Hawthorne, N.J. U.S. 2,808,970, Oct. 8. A container cap for dispensing fluent materials comprising a cover portion having a discharge opening therein and a series of tine members spaced about and encircling said opening in regular order.

Collapsible-Tube Valve-Cap Means, Nicholas J. Vurdelja, Des Moines, Iowa. U.S. 2,808,971, Oct. 8. In a device of the class described, a tubular neck, an end portion on said neck having an opening at one side, a cup cap having an opening in its bottom capable of registering with the opening in said end portion when rotated in one direction, a groove in the outer side of said neck and a projection on the inner wall of said cap.

Means for Securing Wrapper Blanks About Article Packages, Hermond G. Gentry (to Atlanta Paper Co., a corporation of Ohio). U.S. 2,809,486, Oct. 15. Apparatus for packaging cylindrical articles, such as cans, in a wrapper blank proportioned to fold over and overlap beneath a package group of said articles and having securing means formed by aligned locking and retaining tabs in the respective outer and inner overlapping blank portions.

Non-Re-usable Device for Closing a Flexible Tube, Sigurd M. Moberg (to E. J. Brooks Co., Newark, N.J., a corporation of New Jersey). U.S. 2,809,651, Oct. 15. A device for closing a flexible tube at any accessible portion thereof, comprising a strip of substantially nonresilient sheet metal and two adjoining squeezing portions.

Dispensing Container, Roland E. Barnaby (to Rayline, Inc., Mineola, N.Y., a corporation of New York). U.S. 2,809,748, Oct. 15. Dispensing means comprising a hollow, tubular outer portion, means forming a dispensing opening adjacent one end of the outer portion and a base adjacent the other and locking means.

Container, Roger L. White (to The Lawrence Paper Co., Lawrence, Kan., a corporation of Kansas). U.S. 2,809,775, Oct. 15. A container comprising a substantially rectangular container body, extensions on the end flaps remote from the side walls, extensions on the end walls foldable inwardly and downwardly into engagement with the adjacent end flaps, inter-engaging portions on the end wall extensions and bottom wall, a cover and inter-engaging means for securing the cover on the container body.

Corner Lock Cartons, William F. Barrington and William Skillen (to Somerville Ltd., London, Ontario, Canada). U.S. 2,809,776, Oct. 15. A carton comprising a rectangular base having side walls interlockable with one another, a flap integrally connected along a line of fold to end of two opposed side walls, a locking tap having a locking tongue, slits to receive therein said flaps firmly to lock the walls thereof in set-up position.

Cartons, Bruce J. Davidson (to National Biscuit Co., New York, a corporation of New Jersey). U.S. 2,809,777, Oct. 15. In a re-closeable carton having vertical front, back and side panels and top and bottom panels, the top panel being hingedly connected to the top edge of the back panel and foldable across the opening defined by said vertical panels, means for releasably locking said top panel to the front panel, said

VALUABLE CONTENTS DEMAND THE FINEST IN PROTECTIVE PACKAGING

Manufacturers of all types of tin, tin-coated, aluminum, lead, and Sheffalloy tubes. To give your product a container that is safe, sanitary, lightweight, smart and convenient —specify SHEFFIELD. It pays to use the best.

Product of The Sheffield Tube Corporation

Established 1850... Finest packaging from a century of experience

Home Offices and Factory New London, Connecticut

Sales Offices • New York • Chicago • Los Angeles

SHEFFIELD TUBES

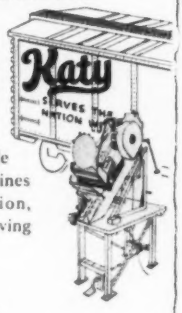
How

MARKEM

solves typical problems in

IDENTIFICATION and DECORATION

marking model railroad cars



Several leading U. S. toy makers had used decals (costly both to buy and apply) on their replica model train cars. Authentic imprints are now made by Markem 25A machines—speeding production, lowering costs, improving looks.

imprinting food container lids

Bothered by the cost, delivery and inventory problems caused by short run lid printing jobs done "outside", a food retailer now prints the lids he needs *as* he needs them, using several 45ABE machines. Supply now matches demand, with the right marking method.

screen process printing: basketballs . . . to candles

Markem 90S and 106S machines "mechanize" screen process printing, giving fine detail yet heavy coverage. Surfaces and shapes now being marked range from basketballs, candles and 3-color instrument dials to play shoes, plastic bottles and billfolds. Excellent for many jobs—the *only* method for some.

These are typical of the thousands of marking problems Markem solves every year for all types of industries. The benefits of 46 years of experience are applied to every job—and can be to yours. Write Markem Machine Company, Keene 1, N. H.

MARKEM

U.S. patents digest

means including a tuck flap, a recess cut into the top edge of the front panel, slots formed in the tuck flap to receive locking tongues and a tab on said front panel to overlie a portion of the flap.

Carrying Device for Containers, John E. Socke, Pelham Manor, N.Y. (to American Can Co., New York, a corporation of New Jersey). U.S. 2,809,861, Oct. 15. A carrying device for drawing together in side-by-side relation and transporting a pair of juxtaposed rectangular containers, each having laterally projecting peripheral ledges at their top ends.

Single-Station Material-Inserting Machine, George H. Dimond (to Consolidated Packaging Machinery Corp., Buffalo, N.Y., a corporation of New York). U.S. 2,810,245, Oct. 22. In a machine for inserting individual lengths of fibrous material into containers, the combination of means for advancing a series of bottles, means for supplying and inserting a series of individual lengths of fibrous material into said bottles and means for cyclically oscillating said inserting means about a vertical axis of oscillation whereby to compact said fibrous material in each said bottle.

Wrapping Machine, Edward F. Cornock et al. (to Package Machinery Co., East Longmeadow, Mass., a corporation of Massachusetts). U.S. 2,810,246, Oct. 22. In a wrapping machine, means to continuously advance an article to be wrapped and means to encircle the continuously advancing article with a wrapper, comprising means to lay portions of the wrapper against each face of the article and means to insert the extending end of the wrapper between the first adjacent face and first end portion of the wrapper.

Capping Machine, George H. Dimond (to Consolidated Packaging Machinery Corp., Buffalo, N.Y., a corporation of New York). U.S. 2,810,248, Oct. 22. A container-capping machine comprising: means for successively presenting a series of containers in properly timed relation, a rotatable cap chamber, means to introduce a series of unoriented caps into said cap chamber, a cap-alignment sensing means, means to rotate said chamber 180 degrees whenever a cap therein is incorrectly aligned, means thereafter effective to move each cap through a predetermined path and capping means.

Apparatus for Directing Applicators into Bottles, Kazmier Wysocki (to Progressive Machine Co., Hackensack, N.J., a partnership). U.S. 2,810,249, Oct. 22. An apparatus for screwing applicator-type closures to the mouths of small-mouth containers comprising: a rotary conveyor, a first rotary endless means including thereon spaced placement means, means for rotating said conveyor and said rotary means, a second rotary means, a first and second cam means for actuating funnel elements and periodically directing the applicators, means for periodically opening said funnel elements, rotatable chucks being effective

No. 1 in a Series

get the most out of your CORRUGATED! use . . . Matthews NATIONAL ADVERTISERS SERVICE

*. . . these industries are!**

★ FOODS ★ SOAPS
★ PACKERS ★ COSMETICS
★ DISTILLERS ★ HARDWARE
★ APPLIANCES ★ MOTIVE PARTS

**We can show you samples . . . as many as you wish.*

How it works for you:

Your design is transferred into accurate dies (corrugated box printing plates) and miniature colored prints (reduced copies) are supplied to you. Now . . . simply give your boxmakers a "print" and whoever he is, wherever he is, he can easily furnish your boxes AS YOU SPECIFIED!

What it means to you:

With the print, your boxmakers all get dies from the same molds, *no duplication of costs.* The ink specifications, code numbers, register, color separation and positioning is exact . . . all from one service. It's simple, uniform, controlled and economical!

Interested? Mail the coupon for a FREE BROCHURE.

JAS. H. MATTHEWS & CO.

BOSTON • CHICAGO
CLIFTON • JACKSONVILLE
PHILADELPHIA • PITTSBURGH

Jas. H. Matthews & Co. Dept. MP-1
3967 Forbes St., Pittsburgh 13, Pa.

Name .....
Title .....
Company .....
Address .....
City ..... Zone ..... State .....

CUT CAPPING COSTS WITH CAPEM

PFEIFFER FOOD PRODUCTS, INC. recently installed this new mayonnaise and salad dressing line in their Buffalo, N. Y. plant. They chose a CaPeM, Model C-4-F for the capping operation.

This capper applies 7200 caps per hour and handles jar sizes from 6 oz. to quarts. It incorporates a special Consolidated chuck-arresting device which prevents the chuck from dropping over the jar if no cap is present. No mayonnaise ever gets on the chuck.

There are more CaPeM Screw Cappers in use than any other make. Users select them because they combine low initial cost, low operating cost, and a minimum of maintenance.

CaPeM applies any standard cap or cover and many special types at speeds ranging from 2,000 to 10,000 per hour. It handles bottles, jars, cans or jugs of any size or shape. It delivers a perfect LEAKPROOF seal.

For recommendations on improving your own capping operation, write Sales Manager, Consolidated Packaging Machinery Corp., 1400 West Avenue, Buffalo 13, N.Y.

CAPEM → THE MODERN SCREW CAPPER

U.S. patents digest

after said opening to screw to the containers those closures having applicators directed into the mouths of the containers and means for holding said containers in a fixed relation on said conveyor.

Boxing and Display Unit, James H. Essick (to Essick Mfg. Co., Los Angeles, Calif., a corporation of California). U.S. 2,810,474, Oct. 22. A convertible box having removable unitary top and bottom panels and four vertically disposed side panels formed of an elongate rectangular sheet of material bent at scored lines establishing an equilateral triangular pedestal for display purposes, coupling means adapted to secure the panels, two rows of vertically spaced openings adapted to register with each other and tongues to project through the adjacent opening in the other end panel.

Can-Containing Carton, Reynolds Guyer (to Waldorf Paper Products Co., St. Paul, Minn., a corporation of Minnesota). U.S. 2,810,476, Oct. 22. A sleeve in combination with a series of generally similar cylindrical objects arranged with their axes in parallel relation, providing a carton including four rectangularly arranged panels hingedly connected with two of the panels extending normal to the axes of the cans.

One-Piece Convertible Container, David E. Kessler, Cincinnati, Ohio. U.S. 2,810,506, Oct. 22. A one-piece convertible container for canned beverages providing a carton for confining the cans and a collapsible top section which, when erected, provides an open receptacle for confining ice upon the top of the cans.

Carton, Philip G. Saunders (to Owens-Illinois Glass Co., a corporation of Ohio). U.S. 2,810,507, Oct. 22. In a carton having upper and lower closure flaps adapted to be folded into face-to-face abutment about their respective fold lines to close an end of the carton, the improvement of an adhesive layer on one of said flaps, said adhesive layer being discontinuous and consisting of a series of isolated adhesive areas arcuately disposed about a common center.

Package-Closing Machine, Esko E. Ranta, St. Louis Park, Minn. U.S. 2,810,996, Oct. 29. In a bag-closing machine, means engageable with the open upper end portion of filled bag adjacent to the top thereof for transporting the bag, gathering elements for closing the bag and means for automatically feeding a pre-determined length of tie wire and forming a loop thereof to hold the bag-top portion in gathered relationship.

Capping Chuck, George H. Dimond (to Consolidated Packaging Machinery Corp., Buffalo, N.Y., a corporation of New York). U.S. 2,811,002, Oct. 29. A container-capping chuck for press-seating caps onto the necks of rimless containers, comprising: a vertically elongated chuck sleeve, an upwardly biased bell-shaped member, restraining means,

a stripper sleeve, cap-engaging means and a release for the restraining means.

Portable Can Package, Edwin L. Arnesen (to Federal Paper Board Co., Inc., Bogota, N.J., a corporation of New York). U.S. 2,811,250, Oct. 29. A portable package comprising a set of tubular containers arranged in at least two parallel longitudinal series and a flexible paperboard carrier comprising a bottom upon which said containers rest, side wall panels upstanding from and hinged to said bottom panel and a top panel.

Article Carrier, Edwin L. Arneson (to Federal Paper Board Co., Inc., Bogota, N.J., a corporation of New York). U.S. 2,811,279, Oct. 29. A paperboard article carrier comprising a box-like article-receiving body defined by opposed pairs of side and end walls and subdivided internally by a longitudinal partition extending parallel to said side walls, a bottom provided with a pair of longitudinally spaced, transversely extending slots paralleling said end walls and a divider insert.

Dispensing Container for Flowable Material, Marion Donovan, Saugatuck, Conn. U.S. 2,811,281, Oct. 29. In a container for flowable dry products the combination—with a box made of paperboard and having a plurality of imperforate generally planar walls—of a device for facilitating the formation of a dispensing opening in one of said imperforate walls and a reclosable flap.

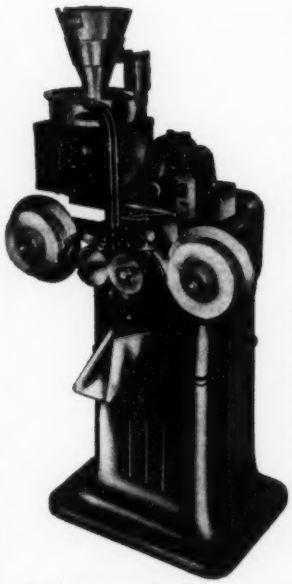
Machine for Filling Liquids into Containers, William Pechy (to American Can Co., New York, a corporation of New Jersey). U.S. 2,811,282, Oct. 29. In a machine for filling liquids into containers, the combination of a liquid-supply tank, a measuring-chamber housing, a cut-off member, a resilient compressible nozzle member, a normally closed valve element at the delivery end of said nozzle member and drain means.

Carton, Edwin L. Long (to River Raisin Paper Co., Monroe, Mich., a corporation of Michigan). U.S. 2,811,296, Oct. 29. A case made from a single sheet of die-cut material having front and rear walls with a bottom wall, end walls at each end of the front wall having a hand hole and a slot cut therethrough, locking end walls and locking extensions.

Carton-Spout Construction with Closure, Karl E. Maxon (to William W. Fitzhugh, Inc., Brooklyn, N.Y., a corporation of New York). U.S. 2,811,297, Oct. 29. A carton comprising two face panels and an edge panel therebetween, an inner top flap, a spout member below said flap, an outer top flap, said flaps being secured together adjacent a tab, a weakened tear line and crease lines.

Box of Foldable Sheet Material, Cecil T. Jones (to Container Corp. of America, Chicago, a corporation of Delaware). U.S. 2,811,298, Oct. 29. A packing box of foldable material comprising a plurality of integral panels relatively foldable from a blank, including lock slots, spaced panels, a locking tongue, score lines and a weakened tear line.

Double-Gusseted Valve Bags, Ernest Landell, Temple City, Calif. (to St. Regis Paper Co., New York, a corporation of New York). U.S. 2,811,300, Oct. 29. A multiwall, sewn-end, paper-valve bag formed of a multi-ply tube having at its side a double gusset with extending portions folded in.



Send us a sample of your product today for our prompt quotation.

WRAP-ADE
Automatic
UNIT PACKAGERS

WRAP-ADE Unit Packagers are versatile, low cost machines designed specifically for faster packaging with less waste. They perform an entire cycle of packaging operations including feeding, filling, forming and sealing practically every type of heat sealing materials.

TABLET PACKAGER

Packages *Tablets, Capsules and Coated Tablets* efficiently and economically. Double Feed Tracks permit speeds in excess of 300 units per minute, within dimensional limits of product. This machine has proved itself in some of the largest pharmaceutical companies, where it is preferred for its speed, simplicity and superior construction. *Other Unit Packagers available for almost any small item.*

SAMPLE PACKAGES

Registration of printed material is possible with Wrap-Ade Unit Packagers.

Feed system is available for packaging LIQUIDS—such as Soy Sauce, Ketchup, etc.

wrap-ade

MACHINE CO., INC.

Celebrating a Quarter Century of Progress in Packaging

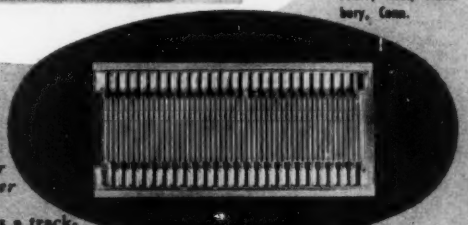
83 VALLEY STREET, BELLEVILLE 9, NEW JERSEY

PHONE—PLYMOUTH 9-6150

NEW Product-Fitting SLIDON* Package

By PLASTIC ARTISANS— Cuts Cost

PA's formed plastic SLIDON* Tray makes ideal package for Roehr disposable hypodermic needles, product of ROEHR PRODUCTS COMPANY, INC., Waterbury, Conn.



This new SLIDON* Package protects Roehr hypodermic needles in individual product-fitting cavities of tough plastic and *effects a saving over the partitioned chip packer formerly used.*

Plastic Artisans' SLIDON* is a track-edged Tray or Dome formed with single or multiple cavities from clear or opaque plastic sheet. A cover of printed cardboard or transparent plastic is inserted in the tracks to hold product in place.

Investigate the sales-increasing, cost-reducing possibilities of Plastic Artisans' packaging. Write today for free 8-page illustrated guide to formed display packaging.

*Trade Mark

PLASTIC ARTISANS, INC.

Dock Street & Martin Place
Port Chester, N. Y.

Custom-Designed, Mass Produced packages, package components, sampling devices, etc. in clear, opaque and colored plastics.

PA

PA-112

TENSION ENVELOPES · TENSION ENVELOPES · TENSION ENVELOPES

Faster Packaging with TENSION ENVELOPES® Touch 'n Seal

PRESS! IT'S SEALED!

No moisture. No strings. No metal. No special equipment.

Tension Touch 'n Seal is the modern way to close packaging envelopes. Flap and envelope are held tight by pre-applied latex.

You eliminate entirely a whole step in the packaging operation (wetting or stapling) with Tension Touch 'n Seal envelopes. Reduces labor time by up to 20 per cent.

Write for samples and see how you can save with Touch 'n Seal. In a complete line of in-stock sizes and styles, open-end or open-side.

Tension Envelope Corp.
820 East 19th Street
Kansas City 8, Missouri

Please send me FREE "Envelope Idea Kit for Packaging Industry," which includes samples of Tension Touch 'n Seal envelopes.

Name.....

Title.....

Firm Name.....

Address.....

City.....Zone.....State.....

337

TENSION ENVELOPES · TENSION ENVELOPES · TENSION ENVELOPES · TENSION ENVELOPES · TENSION ENVELOPES · TENSION ENVELOPES

Turn of year

[*Continued from page 91*]

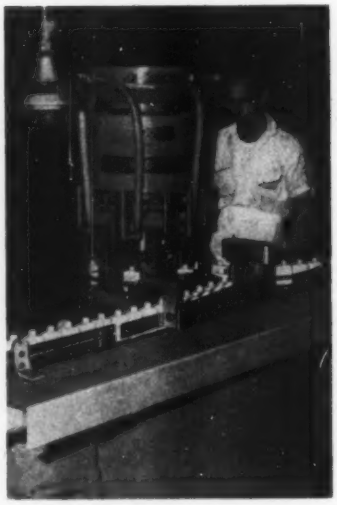
new ideas in functional packages.

Another advanced material is flocked polystyrene. International Silver Co. capitalized on the decorative, thermoforming and tarnish-resistant properties of this improved type of veloured plastic to come up with a beautifully engineered, low-cost luxury pack for flatware (July, p. 130). Soft as velvet, available in decorator colors and formable in contoured shapes, thermoformed flocked styrene should lead to many uses in novelty and gift packaging.

A new plastic, polypropylene, is now available from Italy and is scheduled to be produced in this country this year (see this issue, p. 199). Initial announced price is 65 cents a pound. Available for molding and extrusion, polypropylene is said to have properties rivaling those of polyethylene. The material is certain to receive, and deserve, intensive evaluation as a packaging material.

Containers

One of the most ingenious containers of 1957 and one that will have far-reaching influence is the polyethylene bottle developed by Bristol-Myers for Ipana Plus dentifrice (Oct., p. 114). This squeeze container is the first fundamentally new idea in dentifrice packaging since the invention of toothpaste. It could very well spark revolutionary new ideas in dentifrice packaging, including long-awaited aerosol toothpastes.



Mechanical triumph of 1957 eliminated last hand operation on squeeze-bottling line. This ingenious machine, used by Stanley Home Products, is first to assemble and insert plugs and tubes automatically.

The Ipana Plus container is novel, functional, economical. An interior coating makes it the first squeeze bottle able to retain the aromatic oils in toothpaste. Lined polyethylene bottles (July, p. 147) will permit the packaging of many products that previously could not be satisfactorily contained in polyethylene. More important, Bristol-Myers, with a brilliant attack on the problem of viscous-product dispensing, has given the packaging field "seven o'clock design" as a new concept in achieving instant product flow. The neck is positioned near the bottom of the bottle to provide gravity action. Variations on it may be adaptable to other containers, including aerosols.

Much attention is being given the first liquid-spray food aerosol. Combining skillful engineering of the propellent, valve and container, this "Sizl-Spray" barbecue aerosol is the vanguard of developments that should put aerosols into the food business in a big way (Nov., pp. 116 and 122).

Chocolate-syrup (Dec., p. 151), mustard, pancake-syrup and cheese-spread aerosols are either on or very close to the market. Current work with certain new types of propellents, especially nitrogen, should contribute to aerosol advances both for foods and non-foods. The first nylon aerosol bottle appeared last year as a luxury-type package for Park & Tilford's "Stay Put" hair spray (Sept., p. 112).

The aluminum can made its debut in 1957. Quart cans are being used for oil, with used cans being reclaimed to make the operation economical (Nov., p. 232). The first use of aluminum cans for food products was made by Kraft in packaging grated cheese (Nov., p. 119). Packagers will undoubtedly move ahead from these pioneer applications to score other can successes with aluminum because of the metal's inherent properties: light weight, attractiveness and design adaptability.

The growing demand for packages

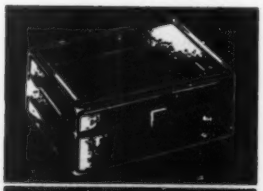
Harkin

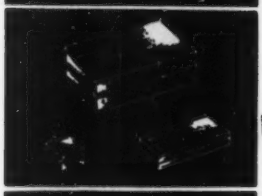
Plastic Molded Boxes Stop Buyers in their Tracks...

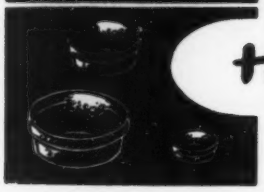
Manufacturers, importers and jobbers from all over the nation report Record Sales chalked up by these dramatic plastic boxes.

SUNBURST—7½" x 4¼" x 2¼"
All Gold, hinged box with attractive sunburst design.

ORCHID—9⅛" x 7⅛" x 1¼"
Gold orchid on clear or pearlized cover







HUNDREDS of Stock Plastic Boxes to choose from . . . MOST SIZES

NO MOLD CHARGE for Special Boxes. Custom-made boxes made to meet your specific requirements without mold charges. Send us your product for a model, at no obligation.

PRICED LOWER THAN MOST OTHER BOXES. Because of Harkin mass production and know-how as box specialists.

STIMULATE YOUR PROMOTION. Give your sales program a new lease on life with these plastic molded boxes. They're re-usable. Their beauty puts your item in the gift category. The fact that your product is always visible and dust proof cuts handling damage to a minimum.

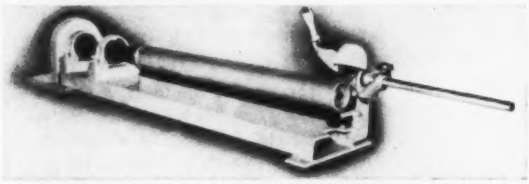
Harkin Affiliates, inc.

• Call or write today for new illustrated brochure and price list. Dept. MP

"MOLDING SPECIALISTS OF PLASTIC BOXES"

95 MADISON AVENUE • NEW YORK 16, N. Y. • MURRAY HILL 6-2415

"TWENTY YEARS OF EXPERIENCE IN THE CREATION OF SPECIAL PACKAGING"



DUSENBERY MODEL 765

Core Cutter

FOR PAPER CORES FROM 3" TO 6" I.D.

SIMPLE OPERATION
•
ACCURATE CUTTING
•
DEPENDABLE
•
LOW COST
•
OTHER MODELS AVAILABLE FOR LARGER DIAMETERS AND WIDTHS

Designed to cut a core with the highest quality edge. Cut edge is straight, smooth and free from burrs. Working procedure is so simple that anyone can operate this core cutter. Light in weight, can be conveniently mounted on a 24" x 72" table top.

Without outboard support, cuts can be made to the center of a 90" long core, permitting 45" long cores to be made. For longer cuts, an outboard support bracket can be supplied. The hardened platen sleeve may be shifted as required to present four different cutting surfaces. Knife, platen sleeves and adapters are quickly replaced or interchanged. John Dusenbery Co., Inc., 275 Grove Ave., Verona, N. J., Tel: CEnter 9-3900.

Dusenbery

CONVERTING EQUIPMENT

INKS

•

for Roller Printing on

TREATED POLYETHYLENE

vinyl • polystyrene • acetates • butyrates

For samples and technical information, call or write

ATLAS COATINGS CORPORATION

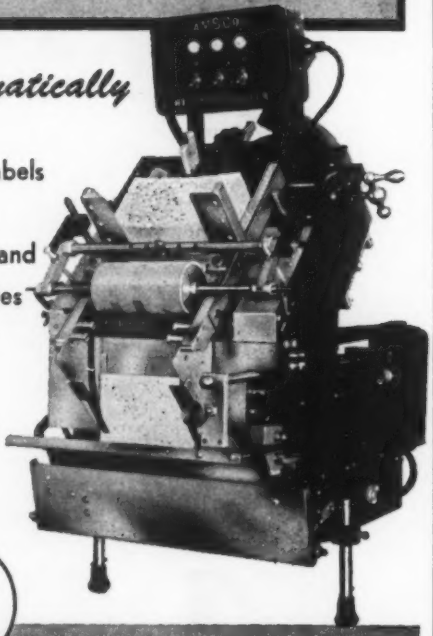
5-35 47th Ave., Long Island City 1, N. Y.
STillwell 4-0537

Put your product in a transparent header-labeled bag and give it

IMPULSE SALES POWER!

Here is the low-cost packaging machine that makes it possible

The AMSCO BAG SEALER/LABELER



Automatically

- seals
- header-labels
- imprints
- punches and
- code-dates

the bag!

Write Dept. MP-1 for descriptive literature

Amsco

AMSCO PACKAGING MACHINERY, INC.

31-31 48th Avenue, Long Island City 1, N. Y.

REPRESENTATIVES IN PRINCIPAL CITIES

Make it a habit... a helpful habit!

Join the many readers of MODERN PACKAGING who check through its Manufacturers' Literature Page each month for "capsule" reviews of significant literature available without charge from suppliers to the field. Use it as a handy way to order current information for your files on packaging materials, equipment, supplies, and specialized services.

Here are typical offerings, excerpted at random, from a recent issue:

"Twenty-page catalog gives pictures, specifications, and prices of extensive line of rigid polystyrene containers, available in most shapes and in hinged lid, and multi-compartmented models."

"Illustrated folder describes special method and equipment for packaging food items and other irregularly shaped products in skin-tight packages at speeds up to 1000 packages per hour."

"Handy guide in the selection and applications of cellophane. The folder outlines cellophane applications in the food, textile, tobacco, and other industries."

"Forty-three page handbook gives information on how products can be pressure packaged. Includes list of sources for propellants, valves, loading equipment, and contract loading services."

"Catalog illustrates, gives specifications for line of round, rectangular and multi-compartmented foil containers. Also describes machines that apply up to 1500 container closures per hour."

"14-page booklet provides extensive properties charts of 11 packaging films, and of metal foils and many types of foil laminations. Also describes and shows 21 film-packages."

The Page is easy to find—it's printed on heavy paper stock. And it's easy to order from too—a postpaid order form is attached to it. Turn to it now—on page 191.

It's helpful . . . it's free. Use it every month!

MODERN PACKAGING

A BRESKIN PUBLICATION

575 Madison Avenue

New York 22, New York

that will go all the way from in-plant processing to table service should find the aluminum can a promising package. The aluminum can is already an important aerosol container in Europe and should succeed here (Nov., p. 122).

Paperboard packages made impressive contributions last year. A wrapless, linerless carton promises significant economies for high-speed protective packaging of frozen and dry foods. A pioneer user is Morton Frozen Foods (Aug., p. 92).

Another new construction is a folding carton with a pre-attached liner of polyethylene-coated paper. Adopted by Savannah Refining Co. for superfine sugar, this package shows potentials for solving a wide range of problems including sifting, moisture loss or gain, and packaging of semi-liquids. Many products—chemicals, dog food, peanuts, liquid starch and the like—now requiring the protection of a rigid container may find a new opportunity for economies in this type of package (Oct., p. 129).

The tetrahedral package has been available in this country for more than a year, but its applications for single-service packs of ice cream (Aug., p. 116) and for orange juice (March, p. 178) are new and significant. This package is economical in materials and in forming and filling.

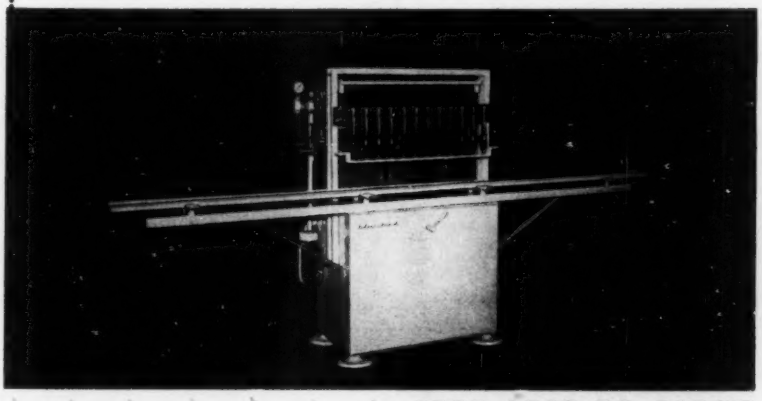
If the Way Detergent self-metering carton (Nov., p. 162) catches on with customers, the merchandising of many pourable dry products could be affected. Certainly, the self-measuring feature would be extremely promotable on TV.

Working packages that have proved highly merchandisable include Stopette and Hush deodorant creams extruded by twisting the bases of polystyrene cartridges (May, p. 114), the Pillsbury shaker package for flour (Aug., p. 94), the molded pulp, combustible, dustless charcoal pack (May, p. 154), a polyethylene hammock pack for fragile instruments (July, p. 114), industrial grease in a saran casing that makes loading a grease gun easy (March, p. 152) and an electrode-fitted carton that cooks vending-machine frankfurters with high-frequency current (April, p. 94). Also important are the self-tracking key unwinder for cans (Jan., p. 105) and the tear-tape openers for

SEMI-AUTOMATIC FILLING MACHINE
SERIES NO. 30

ECONOMICAL

EFFICIENT



FEED LEFT TO RIGHT

FEED RIGHT TO LEFT

International Series No. 30 straight line semi-automatic filling machine is engineered to function on vacuum, vacuum-gravity or gravity filling principle. Simple to operate, it can also be equipped for in-carton filling, and can handle a wide variety of foamy and non-turbulent liquids ranging from pure foods and drugs to acids in glass, polyethylene or tin containers from fractional ounce to carboy size.

No drippage because of International's dual vacuum system.
Completely sanitary supply tank has overflow capacity of 55 gallons.
Easily cleansed sanitary overflow drains automatically.
Double fume trap jar system forms protective barrier for pump when handling corrosive liquids.
Heads are raised and lowered by simple vacuum control ending worker fatigue and container damage.
No container, no fill.

CAPACITY	CARBOYS	GALS.	QUARTS	PINTS
No. of Heads	3	6	12	14
Speed	2	18	48	56

IFM

INTERNATIONAL FILLING MACHINE CORPORATION
Petersburg, Virginia, U. S. A.

BY DEVELOPING AND BUILDING SPECIAL MACHINES

WE SOLVE PROBLEMS FOR THE BAG INDUSTRY

Some of the machines West has built —

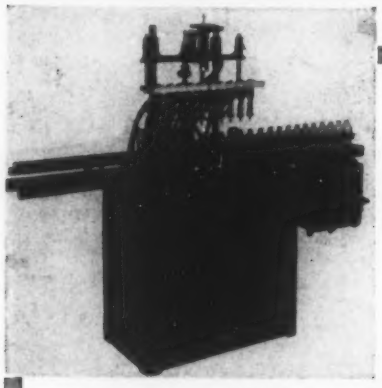
- Baling Press
- Mailing Bag Making Machine
- Heavy Duty Multiwall Bag Baler
- Multiwall Bag Printing Press
- Multiwall Bag Sewing Machine

Since 1919 West Engineers have studied the special problems of paper and textile converters. Their experience can be yours.

WRITE OR CALL OR WIRE US COLLECT
Our private plane is at your disposal

west

Dept. S1 Vawter Ave. on C. & O. Ry.
Richmond, Virginia
Phone MILTON 4-3057



NEW

FASTER FILLING

FOAMLESS

DRIPLESS

FASTEST CHANGEOVER

PERL FILLING MACHINES

FOR VACUUM, GRAVITY OR PRESSURE

ALSO AVAILABLE WITH

ELECTRO PNEUMATIC CONTROLS

New design model COS-K, illustrated, operates by vacuum, in a range of sizes and filling speeds from 20 to 100 bottles per minute and capacities up to 1 gallon. Other models up to 5 gallons available. No foot pedals, no hand levers, just a touch of a button! Even the most unskilled operator immediately attains full production speed.

Write for Circular P-3

PERL MACHINE MFG. CO., INC.

68 Jay Street, Brooklyn 1, N. Y., MAin 4-0165

rigid foil packages (Nov., p. 141).

A notable bit of packaging strategy was Stokely-Van Camp's switch to square jars with interlocking tops and bottoms. Maximum use of shelf space results—with gains of 7 to 14% over comparable sizes of round jars. A side benefit is less breakage, stemming from better stability, more secure stacking (Jan., p. 112).

Glass containers in the aerosol field will play an important part in the growth of aerosol pharmaceuticals and personal products. Designwise, glass is one of the most adaptable and most successfully exploited rigid packaging materials. In this sense, glass is always making packaging news, including the apothecary jars for vitamins, candy, spices and the like (March, p. 158).

The trend to king-size bottles for beverages will continue. Watch for bigger glass containers for apple sauce and other food items. Polyethylene easy-pour fitments will enhance glass containers for syrups, spices and similar products.

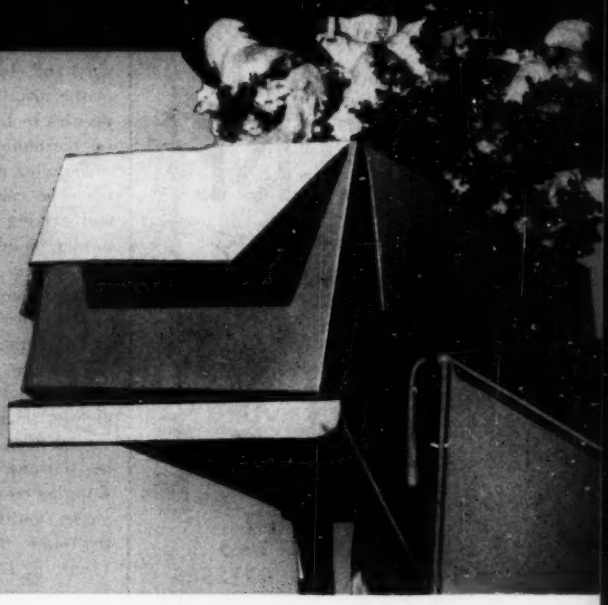
Among the new closure developments were a roll-on applicator for squeeze bottles (July, p. 110), a glide-on applicator (Feb., p. 119), a twist-off cap for catsup bottles (Jan., p. 154), a high-speed lug cap (July, p. 98) and a molded polyethylene "cork" for champagne (Oct., p. 136).

Thermoforming

Blister, skin and contour packs contributed all year long to packaging and merchandising advances. New materials, constructions, methods and machines keep product manufacturers well supplied with opportunities to improve performance and display value, and to lower costs. A reverse-drape method of forming was pioneered by Thrifty Toy House for skin packaging rack-jobbed toys. Significant was the skin packing of squeeze toys without crushing them (March, p. 154). Similarly, Boulevard Hose showed that socks could be skin packed (June, p. 123).

Holley Carburetor Co. used an all-acetate thermoformed package to provide functional transparency and tamperproof protection for small automotive-replacement parts (Oct., p. 148). Actually, thermoforming should offer the industrial packager more efficient packaging lines, better pro-

Over 20,000,000 PRESSEAL Cartons proven in the fields!



Here, in the lettuce fields, self-sealing PRESSEAL cartons seal themselves with the press of a hand. They eliminate breakdowns and work stoppage due to equipment failures, speed manual packing operations and cut labor costs. PRESSEAL carton flaps are factory treated to adhere together, but will not stick to any other surface. PRESSEAL cartons can be used anywhere—in the factory or in the open fields.

If you're packing in corrugated cartons, you'll be packing better with PRESSEAL.

For information on

PRESSEAL© *write to*

PATENTS PENDING

GROWERS CONTAINER CORPORATION

PLANTS IN SALINAS AND FULLERTON, CALIFORNIA AND JACKSONVILLE, FLORIDA

HEADQUARTERS in SALINAS, CALIFORNIA
SALES OFFICES – CALIFORNIA: Salinas, Fullerton, San Francisco, San Jose, Santa Rosa, El Centro, Fresno • FLORIDA: Jacksonville, Tampa, Miami Springs, Orlando
ARIZONA: Phoenix • LOUISIANA: New Orleans • GEORGIA: Atlanta • ILLINOIS: Chicago • ALABAMA: Birmingham • SOUTH CAROLINA: Greenville

INCREASED PRODUCTION...

LOWER COSTS...

HIGHER QUALITY...

America's Leading Converters and Package Printers Look to

THE PRECISE Engineering COMPANY

ROTOGRAVURE PRESSES
20 TO 90 INCHES

DIE-CUTTING CREASING and SCORING PRESSES

LAMINATORS
FILM • FOIL
PAPER • BOARD

SPECIAL CONVERTING EQUIPMENT

Write for illustrated literature today!

THE PRECISE ENGINEERING COMPANY

Precision Equipment for Precise Workmanship!

430 W. GRANT PL., CHICAGO 14 ILL.
Plants: Chicago, Ill. • Green Bay, Wis.

tection and in some instances a big boost into self-service and consumer distribution.

Many of the latest thermoforming applications involve new ways of locking the product to a card. A slide-track acetate bubble with a paperboard base was Carvel Hall's answer to its search for a quick-loading, easy-inspection package for cutlery (Jan., p. 130). Another novel solution to the loading-sealing problem was demonstrated by Admiral Photo Products' use of a pre-formed blister and a self-locking trap-door card (Sept., p. 119).

A good example of the potential that thermoforming holds for counter displays and similar merchandising racks is the Burroughs Wellcome 36-cavity vinyl display for "Marezine" motion-sickness vials (June, p. 144). Incidentally, the unit is formed from laminated opaque vinyl and clear vinyl sheets that lock in the printing. Count on laminated plastics to bring further advantages for thermoforms.

Shipping packages gained ground, too. The continuing swing to color and striking design enables shippers to take on additional jobs in display and selling. The use of pre-printed facing on corrugated (July, p. 116) was an important step to fine printing and illustration on shipping cases.

Two new bag constructions were introduced in '57. The first—a single-ply, semi-rigid kraft container—saves a flour packager $24,000 a year by slashing production, labor and shipping costs. The second is a wide-gusset multiwall bag that reduces the cube of the unit load 20% (June, p. 126).

Machinery

Among the year's highlights in machinery was the introduction of the automatic machine for assembling plugs to dip tubes and inserting them in squeeze bottles (March, p. 161). This machine closes the final gap in mechanizing squeeze lines. Vacuum and gas packaging took giant strides with the introduction of (1) a roll-fed machine that produces nitrogen-flushed pouches for sliced cheese (July, p. 134) and (2) a continuous, automatic vacuum-packaging machine for sliced luncheon meats (Oct., p. 154).

Mechanization in frozen-food packaging was achieved with the

[*Continued on page 194*]

a uto covers TO Z ither bags

— protective and decorative coverings, bags and packaging for thousands of standard and special products.

that's Kennedy's business

"Know-how" gained in almost 50 years of designing and producing products of paper and plastic film is yours for the asking.

Contact a Kennedy engineer in any of these cities . . .

Buffalo	Kansas City
Chattanooga	Louisville
Chicago	New York
Cincinnati	Philadelphia
Cleveland	Toledo
Columbus	Woodstock, Ont.
Detroit	Canada

Sales Representatives in many other principal cities including the west coast.

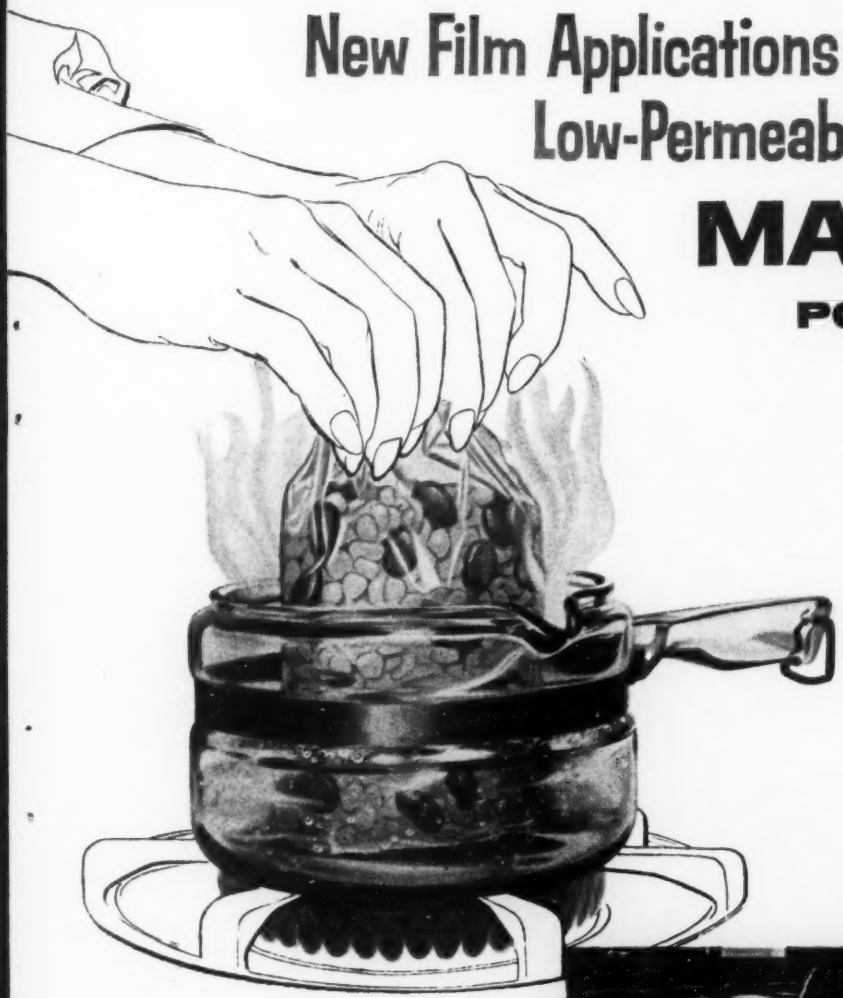
or write direct to . . .

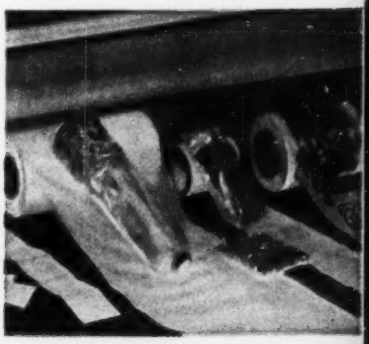
kennedy

CAR LINER and BAG CO., INC.
3000 Prospect Avenue, Dept. A,
Shelbyville, Ind.

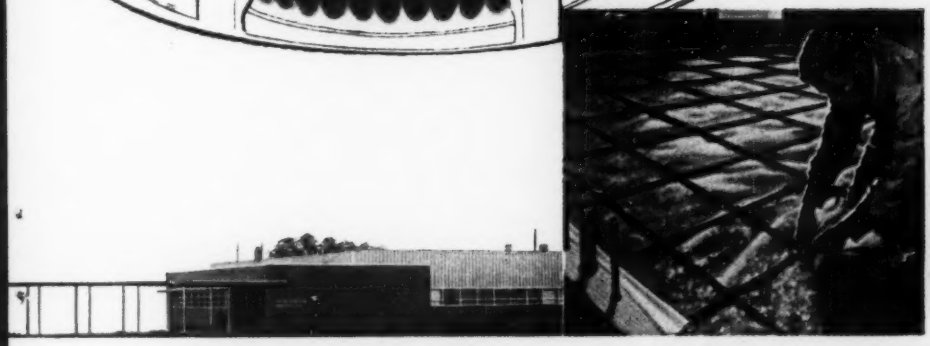
New Film Applications with Low-Permeability, Heat-Resistant MARLEX* 50

POLYETHYLENE





Liquid-tight pouches made from MARLEX 50 film are ideal for packaging foods or industrial products that are oily, wet, frozen or hygroscopic. Foods can be boiled in flavor-sealed MARLEX 50 packages. MARLEX 50 film is impermeable to moisture and most chemicals, and new extrusion techniques yield film with the burst strength and clarity of conventional polyethylene film.



New Sales Service Lab at Bartlesville is completely equipped with latest commercial processing machinery and research apparatus, including environmental test chambers. Phillips experienced technical service staff will assist you in developing new products and processes using MARLEX plastics. Please make arrangements through your local MARLEX sales representative.

High strength and resistance to heat, cold and moisture adapt MARLEX 50 film to many industrial and agricultural services . . . for moisture barriers in building and highway construction, garment bags, drum and carton liners, protective and insulating tapes, high-altitude balloons . . . pond liners, irrigation ditches, mulch, greenhouses, silo caps and liners, protective covers, etc.

Sterilizable MARLEX 50 film is suitable for packaging drugs, medical supplies and instruments . . . covering operating tables . . . and many other hospital uses. Controlled orientation in processing yields a tough, clear, heat-shrinkable film. Excellent stiffness and slip and non-blocking characteristics make MARLEX 50 ideal for use in high-speed packaging applications.

*MARLEX is a trademark for Phillips family of olefin polymers.

PLASTICS SALES DIVISION, PHILLIPS CHEMICAL COMPANY

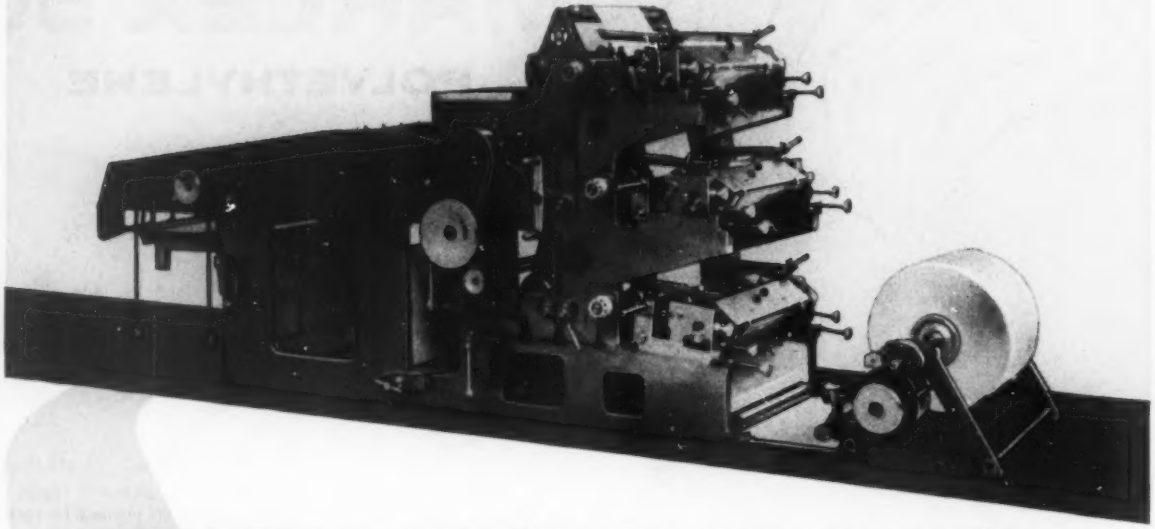
A Subsidiary of Phillips Petroleum Company, Bartlesville, Oklahoma

DISTRICT OFFICES

NEW ENGLAND	NEW YORK	AKRON	CHICAGO	WESTERN	SOUTHERN & FOREIGN
322 Waterman Avenue, East Providence 14, R. I. GEneva 4-7600	80 Broadway, Suite 4300 New York 5, N. Y. Digby 4-3480	318 Water Street, Akron 8, Ohio FRanklin 6-4126	111 S. York Street, Elmhurst, Ill. TErrace 4-6600	330 Security Bldg., Pasadena, Calif. RYan 1-6997	Adams Building, Bartlesville, Oklahoma Bartlesville 6600, Ext. 8108

HHH FLEXO-REX

Flexographic Printer-Sheeter



Multi-Color printing in one operation from roll to sheet

THIS VERSATILE PROVEN PRESS

Provides flexographic multicolor printing up to two, three and four colors for 20″, 25½″ and 34″ maximum web widths.

Offers printing and sheeting in one operation with sheets collected, delivered and accurately jogged *right in the press.*

FLEXO-REX is an ideal press for those plants interested in converting roll stock who desire multicolor printing with sheeting and pile delivery right after printing in one continuous operation.

The FLEXO-REX is available as a complete packaged unit, ready for operation. Write for illustrated literature, and prices.

Write us for information on **REIFENHAUSER** Extruders for Thermo Plastic Materials

H. H. HEINRICH COMPANY 111 EIGHTH AVENUE NEW YORK 11, N.Y.

1. SELECT the items you want
2. CIRCLE the corresponding numbers on the post card
3. FILL IN the information requested
4. MAIL — no postage required

HELPFUL LITERATURE FREE

There is valuable data — worth dollars and cents to you — in the literature and samples described below.

EQUIPMENT • SUPPLIES • SERVICES

PACKAGING EQUIPMENT. Catalog contains information on line of print-forming, wrapping, cartoning and overwrapping equipment for butter, ice cream sandwiches and candy; a wrapper for stationery products; and a "pillow" packaging machine. All specifications and lists of optional equipment are given. Lynch Corporation. **(A-850)**

WEB-FED LETTERPRESS. Brochure presents information on a high-speed, web-fed letterpress which prints from curved electrotypes, stereotypes or rubber plates. George F. Motter's Sons. **(A-851)**

PACKAGE CONVEYORS. Illustrated literature shows operation of single, double or triple belt conveyors for use in handling cartons, for bagging such products as potatoes, produce and fertilizers, and for operations were bags need firm side support. Doughboy Industries, Inc. **(A-852)**

FLUORESCENT COLOR GUIDE. Detachable color swatches help in choice of fluorescent color needed for any packaging or display purpose, as well as indicating specifications to the silkscreen processor. Switzer Bros. Inc. **(A-853)**

LABEL MARKERS. Informative brochure describes self-stop label imprinter for packaging, shipping, box ends, identification, stock control and price marking purposes. Automatically marks, counts, cuts, stacks or re-winds at a rate of 144 labels per minute. Soabar Company. **(A-854)**

COLOR-MATCHING LIGHTING. 4-page illustrated folder discusses specialized lighting systems for the problem of color-matching in all phases of the packaging, labeling and printing fields. Macbeth Daylighting Corp. **(A-855)**

LABELING DEVICE. Punched looseleaf sheets give ready reference material on a portable label imprinter capable of turning out fifty-five 3-line commodity-information tags per minute. Imprinter and label specifications, accessories list included. Toledo Scale Company. **(A-856)**

PROTECTIVE AND DECORATIVE COATINGS. Technical bulletin discusses polyamide resins as components of lacquer-type printing inks because of adhesion to cellophane, glassine, polyethylene and other difficult packaging materials, as well as in inks and coatings used for food packaging. Tables give properties and composition. General Mills. **(A-857)**

VIAL FILLERS. Booklet presents electronically controlled filling mechanisms for vials, ampules and small containers made of polyethylene or rigid materials, and discusses single and double piston types which may be coupled for multiple-filling operations. Lists specifications, accessory parts. National Instrument Co. **(A-858)**

HEAVY-DUTY LIQUID SCALES. Folder describes automatic portable and bench-type scales that weigh high or low-viscosity liquids into containers by means of an air-controlled device. Complete specifications for each are listed. Detecto Scales, Inc. **(A-859)**

CAPPING MACHINES. Data is given on two cappers, one an electrically controlled, automatic type with cap-size range from 20mm to 70mm which accommodates containers up to 7" diameter; the other, a semi-automatic machine with cap-size range from 20mm to 125mm. Specifications listed for both. Carbert Mfg. Co., Inc. **(A-860)**

DRY MATERIALS FILLER. Literature describes high-speed, automatic fiber or metal can-filling machine with 1800 pound, self-supported hopper which fills 300 one-pound cans per minute, and capable of handling over 60 tons of any powder, granular or dry material in 8 hours. Features include changeover for any can height from 4⅝" to 7". Specifications included. Potter and Johnston Company. **(A-861)**

LOCK-BOTTOM BOX FORMER. 4-page leaflet gives details of an automatic lock-bottom unit to be used in conjunction with a straight-line, 180° prebreaking gluer. Discusses advantages and features of machine for use with a wide variety of lock-bottom boxes. Post Machinery Company. **(A-862)**

MULTI-COLOR BAG PRINTING PRESS. Illustrated file folder gives complete specifications and features of a high-speed, multi-wall bag-printing press suited to reproducing two to six colors at a maximum speed of 900 feet per minute. West Engineering Company, Inc. **(A-863)**

NON-FOOD METAL CONTAINER GUIDE. 20-page booklet describes and illustrates construction features of an extensive line of metal cans that includes open-end rounds, pour tops, pry-up lid, screw-top and aerosol types. Lists detailed can specifications. Container Division, The Sherwin-Williams Co. **(A-864)**

SPECIAL PAPERS. Brochure contains three large sample books of paper, among which are coated, wax or glue-laminated, grease-proof and glassine types in both white and colors. Examples of various weights, transparency and opacity are included. Other special papers, as well as information pertaining to those designed with qualities like wet-strength, mold or moisture resistance, are presented. Rhinelander Paper Co. **(A-865)**

SEAL AND LABEL SERVICE. Self-contained envelope in which manufacturer may write specifications for seal, label, string tag, display or decal-type transfer design to solve any problem is offered, along with a packet of examples of foil-printed seals. The Foxon Company. **(A-866)**

FIBRE CAN SEAMERS. 4-page brochure gives features and lists specifications of an automatic machine that applies tops and bottoms to fibre cans of any height from 3 to 8 inches at a rate of 100 to 300 a minute. Potter and Johnston Company. **(A-867)**

Fill out and mail this card now

MODERN PACKAGING

MANUFACTURERS' LITERATURE SERVICE

Please send me the free items circled below. ☐ I am a non-subscriber* I am ☐ a subscriber

A-850 A-851 A-852 A-853 A-854 A-855 A-856 A-857 A-858 A-859 A-860 A-861 A-862 A-863 A-864 A-865 A-866 A-867 A-868 A-869 A-870 A-871 A-872 A-873 A-874 A-875 A-876 A-877 A-878 A-879 A-880 A-881 A-882 A-883 A-884

*If you do not have a personal subscription and would like to receive the next twelve monthly issues plus the next annual Encyclopedia issue (U.S.A. & Canada, $7.00; all others, $30.00) please check below.

☐ Check enclosed ☐ Send bill

NAME ..... POSITION .....
(Please Print Plainly)

COMPANY .....

STREET ..... CITY ..... STATE .....

(This card cannot be honored after April 15, 1958)

FREE HELPFUL LITERATURE

There is valuable data—worth dollars and cents to you—in the literature and samples described below.

1. SELECT the items you want
2. CIRCLE the corresponding numbers on the post card
3. FILL IN the information requested
4. MAIL—no postage required

EQUIPMENT • SUPPLIES • SERVICES

CUTTING, CREASING AND EMBOSSING. A line of die-cut presses for the manufacture of multiple forms of folding boxes, cards, gaskets, etc., is presented in a series of leaflets, with a discussion of design features, capacity, specifications lists and equipment clearly presented. Thomson-National Press Co., Inc. (A-868)

FOOD PRE-PACKAGING EQUIPMENT. Catalog is devoted to a line of stainless steel, electrically-powered or pedal-operated pre-packaging tables for heat-sealing, labeling, crimping, stapling and price-marking of meats, produce and dairy items. Specifications for each model are listed. J. B. Dove and Sons, Inc. (A-869)

FLAT GUMMED PAPERS. Elaborately prepared ready-reference sample book shows complete line of coated and uncoated gummed papers in white and colors. Included is a manual for selection of proper gummings, printing surfaces, size and weight tables, and a discussion of printing qualities of each paper. Ludlow Papers, Inc. (A-870)

AUTOMATIC GLUERS. 4-page brochure lists twelve features of a line of gluers for paper box wraps and special gluing problems, among which feed, pick-up and drive are discussed. Table gives specifications for minimum 2" x 4" up to maximum 22" x 24" wrap machines. Globe Manufacturing Co. (A-871)

VPI CALCULATOR. Simplified method of calculation of vapor rust preventive paper requirements is presented in an illustrated booklet. Includes a table outlining package compositions and indoor and outdoor time schedule of protection, and discusses inner and barrier-wrap coated papers. Fine Paper Div., Ludlow Papers, Inc. (A-872)

POLYETHYLENE PRINTER. Brochure describes features of flexographic printer and accurate rewinder for polyethylene, cellophane and other flexible materials that prints in from 1 to 6 colors and gives detailed press specifications. Lee Machinery Corporation. (A-873)

SKIN PACKAGING FILM. Leaflet discusses problems of skin packaging. The basic process, proper film, problems of combining films and paperboards, machinery requirements are covered. Sample of this type of packaging is enclosed. Print-A-Tube Company. (A-874)

LIQUID FILLING EQUIPMENT. 6-page brochure presents a line of specialized vial, ampul, tube and bottle fillers and stoppering units designed for such applications as aerosols, antibiotics, biologicals, perfumes, dyes, emulsions, oils and reagents. Popper & Sons, Inc. (A-875)

EFFICIENCY PACKAGING. 8-page case history describes how metal-edge boxes for machinery parts cut costs, save shelf space and cut inventory time for a leading air-conditioning firm. National Metal Edge Box Company. (A-876)

BLOWN TUBING FILM. Technical information on "Marlex" polyethylene film, with complete description of features such as permeability, resistance to chemicals, is contained in 4-page folder. Film characteristics, blowup ratio chart, list of extrusion conditions and suggested packaging uses are listed. Phillips Chemical Company. (A-877)

BLISTER-PACK HEAT SEALER. Illustrated data sheet presents specifications and describes an automatic or semi-automatic blister-pack heat sealer which packages hardware, soft goods and granular products at a speed of between 5 and 15 packages per minute, with "bubble" size up to 9" x 6". Erdco Engineering Corporation. (A-878)

RUST INHIBITIVE PAPER. 6-page bulletin describes methods of using rust inhibitive packaging paper to prevent corrosion of ferrous metal parts, thereby eliminating the need for protective oil coating. Marvellum Company. (A-879)

THERMOPLASTIC SHEET AND FILM. Illustrated catalog gives information on thermoplastic sheet and film and describes copolymer styrene, linear polyethylene, cellulose acetate, cellulose butyrate, ethyl cellulose, woodgrain and embossed types, including a rubber-modified sheet made for print-register applications. Campco. (A-880)

PIGMENT DISPERSION GRAVURE INKS. Bulletin describes ink system of ink concentrates and reducing additives for gravure printing on treated polyethylene film that can be adjusted with thinners to print from engravings of any depth and pattern. Features, applications and prices are included. Claremont Pigment Dispersion Corporation. (A-881)

SILICONE COATINGS AND SAMPLES. Illustrated brochure on the properties and performance of papers treated with silicone coatings reviews points such as non-contamination, permanence, water-repellency, non-migration. In the folders are samples of one-side coated kraft, glassine and parchment for comparison with conventional materials. Dow Corning Corporation. (A-882)

FLEXOGRAPHIC AND ROTOGRAVURE PRESSES. Literature gives information on two lines of presses designed for bags, wrappers, tags, labels, carbon tissue, and that print one to four colors on paper, foils, cellophane, polyethylene and other films. Includes full description of features and specifications. Geveke and Company, Inc. (A-883)

CELLOPHANE TAPES. Illustrated bulletin describes line of plain and colored transparent cellophane tapes and discusses their application for such packaging functions as carton sealing, bundling, bag sealing and "combination deals." Minnesota Mining & Manufacturing Co. (A-884)

Fill out and mail this card now

Postage Will be Paid by Addressee

No Postage Stamp Necessary If Mailed in the United States

BUSINESS REPLY CARD

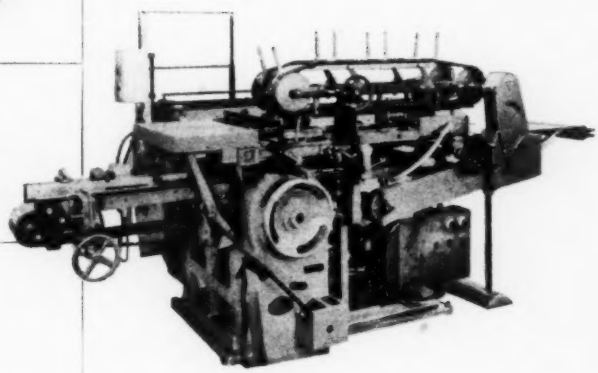
First Class Permit No. 2484 (Sec. 34.9, P. L. & R.), New York, N. Y.

MODERN PACKAGING

Village Station Box No. 103

New York 14, N. Y.

GET HIGH SPEEDS, ACCURATE REGISTRATION
ON A VARIETY OF WRAPS



For consistently neat, attractive packages at speeds up to 100 a minute, you need the versatile Package Model FA. One machine will give you top daily output on cartons, trays or specialty items. Size changes require only minutes time, and another roll of wrapping material can be inserted in less than five minutes.

An electric eye mechanism gives you the most accurate registration possible, with an automatic paper stop to control feeding. You get neater wraps, too, because packages pass through the FA in a straight line, and operations are performed without turning.

To find out how the Model FA can help solve your packaging problems, contact our nearest office.

compare these features

MATERIALS: FA glues or heat seals. It can handle waxed, sulphite or Kraft paper, cellophane, glassine and reinforced foils.

SIZE RANGE: For Model FA, 2" to 11½" L, 1⅛" to 5⅝" W, ⅛" to 3½" H. Models FA-2, -3 and -4 will handle larger packages.

PAPER FEEDS: Both roll and sheet feed is available.

END FOLDS: Double-point end fold is standard; reverse double-point fold, single- or double-point turned-under fold, crimp seal and special folding for extension edge boxes also available.

ATTACHMENTS: Easy-opening tape, medallion and code dater attachments available.

PACKAGE

PACKAGE MACHINERY COMPANY, EAST LONGMEADOW, MASS.
NEW YORK • PHILADELPHIA • ATLANTA • BOSTON • CLEVELAND • CHICAGO • KANSAS CITY
DALLAS • DENVER • LOS ANGELES • SAN FRANCISCO • SEATTLE • TORONTO • MEXICO CITY

Bracon . . . SQUEEZE-TO-USE PACKAGING

Convenience packaging captures another market!

Controlled dispensing . . . disposable container! That's the big reason why inert polyethylene tubes and bottles are used by all leading manufacturers of hair waving preparations.

For the professional hairdresser or the home permanent user these compact, unbreakable BRACON containers have opened up new highs in convenience, cleanliness and simplicity. Remove the cap or snip the tip . . . screw on applicator nozzle . . . and *squeeze-to-use.*

Functional BRACON packaging is a natural for the trend to leisure living . . . it's achieving new merchandising values in so many fields. What could it do for your product?

Only Bradley offers squeeze-to-use *tubes, bottles, and cans!* Contact your BRACON representative today . . . offices in most major cities.

BRADLEY CONTAINER CORPORATION

A SUBSIDIARY OF AMERICAN CAN COMPANY

Maynard, Mass. — *New York, Chicago, Los Angeles, Toronto*

[*Continued from page 133*]

automation of Taterstate's cartoning, check-weighing operation for frozen French fries (June, p. 134). New carton-filling and check-weighing machinery took over a tedious, painstaking job formerly requiring several dozen workers.

Bayer's line for its new squeeze-bottle nasal sprays demonstrates advanced equipment and methods. The line is turning out 120 completed units a minute and is said to be capable of 180 (Sept., p. 140). This is a striking gain in filling and sealing this type of container.

A new high-speed multipacker installed by Pabst should interest packagers with space problems. It is engineered for compactness and a single operator can maintain inspection while loading blanks (Sept., p. 144).

Sealing of blister packs, of course, is one of the major problems in thermoforming. Masonite's automatic blister-sealing machine has doubled production of the company's packages of pegboard accessories (Nov., p. 120).

A space-saving cigarette box-maker (Dec., p. 97) and a downtime-eliminating flying splicer for overwraps (Dec., p. 102) are important to high-speed, mass-production packaging.

All packagers will want to study the challenges and potentials in machine handling of polyethylene film because polyethylene has become the lowest-cost film (Dec., p. 98, and this issue, p. 130).

Film bag for plants

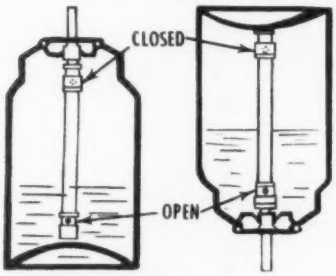
Shelf life of plants sold in retail stores—and particularly supermarkets—may be greatly increased as a result of a philodendron plant that has survived and thrived for four years in an airtight polyethylene bag at Rutgers University.

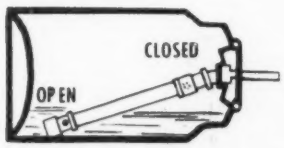
The polyethylene bag prevents escape of moisture, which is then constantly re-used by the plant as it lives and grows in a normal manner. According to Dr. S. H. Davis, plant pathologist at Rutgers, this simple technique eliminates the need for watering and will enable plants to be sold on store shelves in the same way as any other product.

Supplies and services: *Bags by Visking Co., Chicago.*

New aerosol sprays from all positions

Researchers at the U. S. Department of Agriculture have devised a new design for dip tubes that permits operation of an aerosol right side up, upside down or sideways. No matter what the position, there will always be a discharge of product, not of gas. USDA has applied





for a public patent to make the new design available to manufacturers, according to a report appearing in the November, 1957, issue of "Agricultural Research," a USDA publication. USDA scientists developed the original aerosol bug bombs that started pressure packaging on its way.

The new type of dip tube has two openings: one near the top and the other close to the bottom of the tube. Each end of the tube is fitted with a sliding-collar or sleeve-valve fitment. When the aerosol container is held upright, the top valve closes and the bottom valve is open. When the container is inverted, the bottom sleeve slides down, closing the bottom valve and the other valve is opened.

According to Agricultural Research chemist, R. A. Fulton, who devised the new "always-ready" aerosol system, the tube can be copper, steel, polyethylene or nylon. Glass beads may be used in place of sleeve valves, inserted inside each end of the tube to open or close the openings in the tube.

Conventional aerosols have been designed only for single-position dispensing. Those with dip tubes are held upright. If turned upside down, gas rather than product is allowed to escape. Certain foam-type aerosols are not equipped with dip tubes and are designed for use in an inverted position. These aerosols, if held upright, allow gas to escape. Many products are satisfactorily packaged in single-position aerosols. However, certain insecticides, cleansers, paints and personal products may find the three-way aerosol offers added convenience by enabling the user to hold the aerosol in any position that's handy for spraying hard-to-reach surfaces.

Packaging machinery exposition

Widespread promotion by packaging machinery and supply companies is expected to boost attendance to a new high at the second Packaging Machinery & Materials Exposition to be held at Convention Hall, Atlantic City, March 25-28.

Augmenting the show and coordinated with it in three morning periods from March 24-26 will be a series of special technical sessions to be conducted by the Packaging Institute. Theme of the sessions will be "Mobilizing Materials, Management, Men and Machines for Maximum Packaging Efficiency," according to L. H. Zahn of Ciba Pharmaceutical Products, Inc., chairman of PI's Technical Operations Committee. Both the speakers and titles of the papers to be presented will be announced shortly.

The prediction that registration for the show will top the 8,237 figure set at the first of these biennial meetings at Cleveland in 1956 is based on the cooperation shown by exhibiting companies in promoting the exposition, according to K. B. Hollidge of Arthur Colton Co., chairman of the show committee of the Packaging Machinery Mfrs. Assn., sponsor. More than 200,000 stickers are now being used by these arms on correspondence and an additional 10,000 pieces of promotional literature are being distributed to "talk up" the show.

With only two months left to go, exhibit space is 90% sold out, according to Chairman Hollidge. More than 135 companies have already reserved about 53,000 sq. ft. of space.

Bracon

SQUEEZE-TO-USE PACKAGING

SALES AGENTS

Allen & Company
1863 Wazee St., Denver 2, Colo.
W. G. Atkinson Co., Inc.
766 Commerce St., Tacoma, Wash.
Chemical By-Products, Ltd.
23 Racine Rd., Rexdale, Ontario, Canada
Warren Curry Company
599 Plum St., N. W., Atlanta, Georgia
Palmer Supplies Co. of Florida
209 E. Robinson, Orlando, Fla.
S. Riekes and Sons
1402 Webster St., Omaha 2, Neb.
Simpson-McCall Co., Inc.
412 Burke Bldg., Rochester, N. Y.
C. Horton Smith Co., Inc.
3 Knox Rd., New Orleans, La.
Wilson Plastics Container Corp.
25 N. 3rd St., Brooklyn 11, N. Y.

CONTRACT PACKERS

Acepak, Inc.
7250 So. Chicago Ave., Chicago 19, Ill.
The Arner Company, Inc.
281 Michigan Ave., Buffalo 3, N. Y.
Beco Laboratories
352 N. Fairview Ave., St. Paul 4, Minn.
William Bishop Company
2449 No. Naomi, Burbank, Calif.
Chemical By-Products, Ltd.
23 Racine Rd., Rexdale, Ontario, Canada
Douglas Chemical Company
620 East 16th St. N., Kansas City 16, Mo.
Fluid Chemicals, Inc.
878 Mount Prospect Ave., Newark, N. J.
R. Hurwich Co.
2546 10th St., Berkeley, Calif.
Jiffee Products
4040 Walnut St., Denver, Colo.
Old Empire Mfg. Chemists, Inc.
Mt. Prospect & Vernon Ave.
Newark 4, N. J.
Pacific Coast Filling
1401 E. 15th St., Los Angeles, Calif.
Packaging Corp. of America
1372 Wilson St., Los Angeles 21, Calif.
Paket Corp.
9022 So. Baltimore Ave., Chicago 17, Ill.
Paris Cosmetics, Inc.
Roosevelt Ave. at 99th St.
Corona 68, L. I., N. Y.
Schieffelin & Company
30 Cooper Sq., New York 3, N. Y.
Sheffield Tube Corporation
170 Broad St.
New London, Connecticut
Strong-Cobb, Inc.
2654 Lisbon Rd., Cleveland, Ohio
Tubed Chemicals Corporation
2 Pine St., Easthampton, Mass.

BRADLEY CONTAINER CORPORATION
Maynard, Massachusetts
A subsidiary of
American Can Company

WEST VIRGINIA PULP AND PAPER

KRAFTSMAN WHITELINER is a new *test* liner specially developed by Westvaco for use in containers and displays. Its smooth, bright blue-white surface provides perfect reproduction of the finest detail and superior contrast even with lighter subdued colors. High scuff resistance and unusual strength make KRAFTSMAN WHITELINER ideal for eye-catching displays and corrugated containers.

BETTER BOARD for BETTER BOXES from WESTVACO

The name KRAFTSMAN covers a *complete line* of containerboard for every conversion use. All members of the KRAFTSMAN family offer the superior quality and controlled uniformity usually associated with Westvaco products. In addition to KRAFTSMAN WHITELINER, this line includes . . . **KRAFTSMAN LINER** top-quality kraft linerboard. **KRAFTSMAN SUPERLINER** smoother, brighter kraft linerboard. **KRAFTSMAN WEATHER-TITE LINER** durable wet-strength linerboard. **KRAFTSMAN DURA-CORR** high-quality corrugating medium. **KRAFTSMAN WEATHER-TITE DURA-CORR** corrugating medium for use in cold storage and other high-humidity containers. For more information, call your KRAFTSMAN Representative today.

W

C O M P A N Y 230 Park Avenue, New York 17, N. Y.

The Patronage of Well Known Names Is Significant

Christian Brothers are now applying seals automatically with the Gisholt Sealamatic. If you use cellulose neck band seals, and your lines run 80 or more BPM, then get the facts on this fine machine. Write...

GISHOLT MACHINE COMPANY
Madison 10, Wisconsin

New! LARGE Industrial Specialty Bags

POTDEVIN
LARGE FLAT AND SQUARE BAG MACHINE

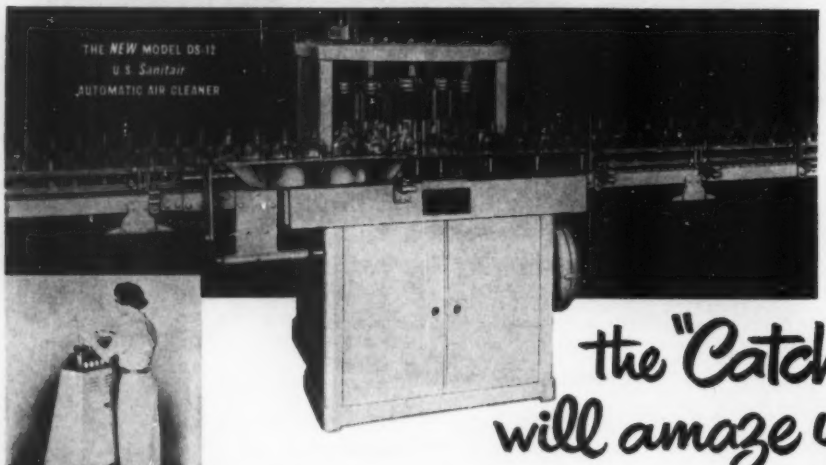
General Information

- Ideal for heavyweight papers and deep tuck bags.
- Makes a wide range of shipping container bags, container liners, laundry bags, waxed garbage bags, etc.
- Can be equipped with pneumatic feed rollers, mill roll lifter.
- Farval lubrication and seam paste extruder.
- Range—6¼" x 15" up to 23" x 37½".
- Direct-connection for flexographic web press.

Write for samples and complete details.

POTDEVIN MACHINE CO.
244 North Street Teterboro, N. J.

Designers and manufacturers of equipment for Bag Making, Printing, Coating, Laminating, Gluing and Labeling



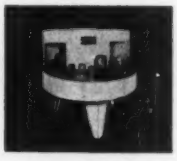
THE E-Z TWO-TUBE AIR CLEANER. Containers inverted over air valves, two at a time, up to 40 per minute. Blows carton lint, dust, etc. out of new containers; any size or type. Send for the E-Z Bulletin.

the "Catch" will amaze you!

OF COURSE your containers are clean . . . they usually come to you in cartons. Yet, to be sure, run them through a U. S. Sanitair and be amazed at the "catch" of dust, carton lint, etc., from supposedly clean containers.

Throughout the packaging world, the U. S. Sanitair is widely adopted as the sure sanitary precaution. Many find it essential to product uniformity; to safeguard the material content of their products; or as a precaution against failure of aerosol valves.

Built in models of varying capacities with container size changeover. Handle all size container openings including AGST, wide-mouth and aerosol-valve finishes. Send for the "Sanitair Bulletin" now.



U. S. BOTTLERS MACHINERY CO.
4017 North Rockwell Street Chicago 18, Illinois

BOSTON • NEW YORK • PHILADELPHIA • SAN FRANCISCO • LOS ANGELES
SEATTLE • DENVER • PORTLAND, ORE. • OGDEN • JACKSON, MISS. • KANSAS CITY
TUCSON • ATLANTA • HONOLULU • SANTIAGO • SAO PAULO • MONTREAL
TORONTO • VANCOUVER • WINNIPEG • TOLEDO (export)

FOR RINSING any size or shape bottles or jars. The U. S. Rotary Rinser cleans both insides and outsides of containers. For water, steam or air. Send for the Rotary Rinser Bulletin.

SPECIALISTS IN LIQUID FILLING AND CONTAINER CLEANING EQUIPMENT

Polypropylene available

Immediate availability of polypropylene resin—a thermoplastic material that may one day become as important in packaging as polyethylene, which it somewhat resembles in chemical construction—is indicated in announcements last month by Montecatini of Milan, Italy, and by Hercules Powder Co., Wilmington, Del.

According to Montecatini, its polypropylene, called "Moplen," has high heat resistance; excellent resistance to solvents, acids and other chemicals; high strength characteristics, and unusual electrical properties. The Italian firm claims that its engineers can vary the molecular weight and degree of crystallinity in the polymer over a wide range, enabling the material to be formed into films and a variety of molded, vacuum-formed and extruded shapes. Molded and extruded samples of this material were exhibited by Montecatini last month at the Chemical Industries Exposition in New York and are available through the company's New York representative, Chemore Corp.

The new polymer, which is derived from propylene gas, a relatively inexpensive petroleum by-product, was to go into pilot production for the first time in this country in December at Hercules' new Parlin, N.J., plant. The facility will have a capacity of 20 million pounds per year, according to Hercules officials. Called "Pro-fax," this resin is said to be "unique among plastics, in that it possesses a wider range of properties than any other single plastic yet developed."

A spokesman for the firm states that the material has superior tensile strength, hardness, stiffness, resilience and clarity, while retaining the inert and water-resistant characteristics of hydrocarbon polymers in general.

Montecatini's resins, which are the tangible result of basic research performed by Prof. Giulio Natta, announced last year, are now available in "evaluation quantities" from the U.S. representative.

Hercules officials say that their polymer, which was developed independently after several years of research, is being introduced at an initial sales price of 65 cents per pound.

Hansella

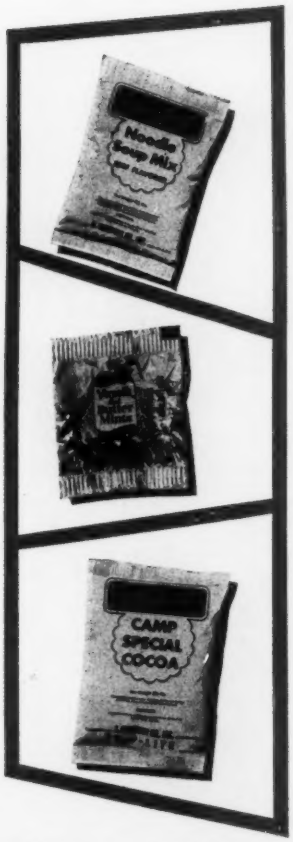
PACKS

for high sales appeal

and

low production costs

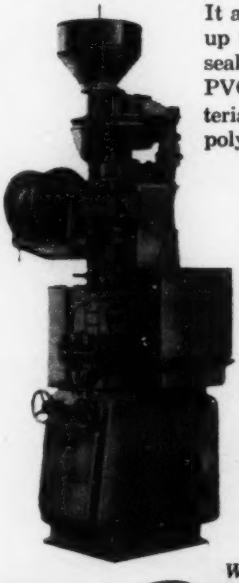
from the printed reel to the finished pack



When you use Hansella pillow-type bags you benefit from a combination of advantages that adds up to sales stimulating packaging at low production costs. Here are the chief features that account for the growing popularity of pillow-type packaging:

- **Consumer Convenience**
- **Heat Sealing**
- **Transparency**
- **Rock Bottom Shipping Costs**

The HANSELLA 125 is a complete packaging line in one machine.



It automatically forms, fills, and seals—making bags up to 6" x 7". And a specially developed electronic sealing device permits the use of *unsupported* pliofilm, PVC, saran, vinyl, and other thermoplastic film materials. The impulse sealer processes *unsupported* polyethylene.

Handles SOLIDS · GRANULES POWDERS · LIQUIDS · HARDWARE

Consider these Hansella 125 features in terms of stepping up your operation:

Interchangeable Heat Sealing Units. Machine is fitted for either heat-pressure, impulse, or electronic sealing.

Flexible Feeding. Uses either volumetric, net weighing, auger, or pump feed system.

High Output. Up to 3600 bags per hour with the standard or electronic sealer, and 2400 per hour with the impulse sealer.

Compact and Sturdy Structure. 3'4" x 15'11" x 12'5" high.

Write for complete information on the Hansella 125 today.

Hansella

HANSELLA-WERKE ALBERT HENKEL A.G.
Viersen, West Germany

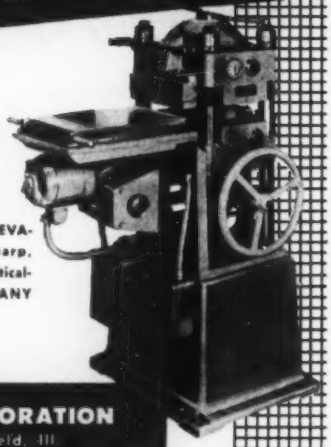
American Factory Branch HANSELLA MACHINERY CORPORATION
Grand and Ruby Avenues, Palisades Park, New Jersey
Whitney 3-4700 Cables – COHANSELLA

PROTECT YOUR PROFITS!

Make Your Own RUBBER PRINTING & IMPRINTING PLATES

FASTER... BETTER... AT LOWER COST

with an **EVA-PRESS**



YOU'RE SURE of accurate, perfect impression, low-cost rubber plates *on time* when you own an EVA-PRESS. No more premium prices or costly delays on plates ordered outside your plant. Compact, easy-to-operate EVA-PRESS turns out top-quality rubber plates at top speed . . . *pays for itself* in savings and *extra profits!*

- 4 sizes to choose from — up to 13" x 18" capacity.
- Simple — anyone can operate.
- UNCONDITIONALLY GUARANTEED for long, trouble-free service.

Plates Made on Your EVA-PRESS Give You Sharp, Clear Printing on Practically ANY MATERIAL, ANY SURFACE.

WRITE TODAY for FREE Catalog and Details on Special 60-DAY FREE TRIAL!

AMERICAN EVATYPE CORPORATION

755 Osterman Ave • Deerfield, Ill.

? are you acquainted with

the manufacturers' literature page

You ought to be. It's the page, in every issue of MODERN PACKAGING Magazine, that describes a wide variety of pamphlets, brochures, and other manufacturers' publications which are currently available *without charge.*

To obtain any of the literature which is listed, you merely fill in and mail the postage-free reply card. We do the rest. Look for the Manufacturers' Literature Page in each issue of MODERN PACKAGING. It is easy to recognize because it is printed on heavy grey paper. It is your key to detailed information about packaging equipment, supplies and services.

A Service Of

MODERN PACKAGING A BRESKIN PUBLICATION

575 Madison Avenue • New York 22, N. Y.

Polyethylene

[*Continued from page 134*]

researchers, however, feel that its complexity requires too great a knowledge of plastics and their behavior to be a success in the average packaging plant. Research is now under way to simplify the process.

Progress in machinability

So much for physical properties. What about machinability? Can anything be done to correct the limpness and stretchiness that have made polyethylene a notoriously hard material to push through overwrappers?

Some progress has been made in designing machines that get around these problems. These developments will be discussed in the next article in this series. But a great deal has been accomplished by film and resin suppliers during the past two years to change the basic nature of the film itself—to give it more snap and stiffness and less stretch.

Chief consideration in this improvement is density, which is nothing more than an index of how close together the molecules are packed in the film. This is measured in grams per cubic centimeter. Like trees in a forest, the more branches the molecules have, the farther they are held apart. The less the branching, the closer they can be packed together. This affects film stiffness, stretchability and tensile strength.

In 1946 commercial polyethylene (with many branched molecules and a low density of 0.914) was limp, stretchable, lacked slip and was almost unfeedable in overwrappers.

Now, standard films with densities running up to 0.930—on the market since 1956—are three times as stiff as the earlier material and are available with coefficients of friction as low as 0.40 to 0.05—well within the level of slip necessary for excellent machine handling. Also, as stiffness went up, stretchability went down.

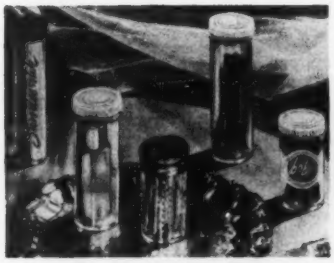
There has been a great deal of discussion about the possible benefits of high-density polyethylene made by low pressure or other new methods—linear resins containing few branched molecules. There is no doubt that these films will cause a definite impact on polyethylene overwrapping when they finally get into full production—but there are many unresolved questions.

High-density films can definitely

for the finest in

Rigid

Plastic Packaging



use **Lermer** the

experienced source

You can take advantage of more than 35 years experience that is available to you from LERMER in the creation of distinctive plastic containers. For drugs, pharmaceuticals, cosmetics and small industrial parts, no other container offers you so many **plus** advantages as the vials that display, protect and assure you of repeat business.

LERMER Plastic Containers are:

- **Shatterproof**
- **75% lighter than glass**
- **Not affected by alcohols, alkalis or weak acids**
- **Tasteless and Odorless**
- **Available in Clear, Opaque, or Colors**
- **Printed during Manufacture**
- **Uniform for easy filling and capping**
- **Container has convenient Re-Use value — a constant reminder for repeat business**
- **Metal or plastic closures**

Write for samples, catalog and prices.

LERMER PLASTICS, INC.

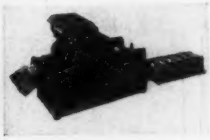
502 South Avenue, Garwood, N. J.

REPRESENTATIVES IN THESE CITIES: Rochester, Memphis, Miami, Cincinnati, Columbus, Cleveland, Chicago, Detroit, Minneapolis, San Francisco, Los Angeles, Toronto, Philadelphia.

PIONEERS AND SPECIALISTS IN PLASTIC CONTAINERS

The ROTO KIMCO

ENDS



COSTLY LABEL INVENTORIES...

AND ANSWERS **ALL** REQUIREMENTS FOR **MODERN PRODUCT IDENTIFICATION**

FASTER · CLEANER · MORE VERSATILE

- Prints all types of pre-pack labels, bag tops, box-end labels, tags and tickets —at rate of 150 per minute.
- Prints from easy-to-use metal logos or rubber plates.
- Ends time-consuming, costly hand-marking operations.
- Prints exact number of labels needed, as needed, **no more—no less.**
- Prints on all types of paper stock — gummed, ungummed, heat-seal, pressure-sensitive, as well as heavy tag board. From 1 to 23 lines of copy—6 pt. to GIANT 36 pt. type—or plates.

SINCE KIMBALL 1876

A. KIMBALL COMPANY

444 Fourth Avenue, N. Y. 16, N. Y.

Offices in Principal Cities

A. KIMBALL, LTD., 85 Advance Rd., Toronto, Canada

Get The Complete Story Send In Coupon Today

☐ Please send illustrated brochure.

☐ Would like to arrange for demonstration.

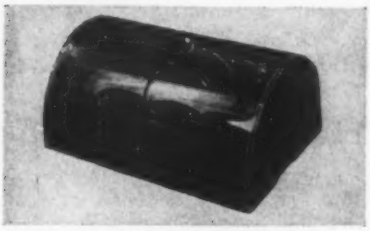
Name_____

Company_____

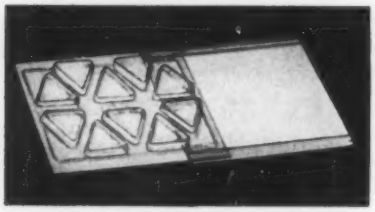
Address_____

City_____ Zone____ State_____

A striking and attractive blister package adopted by W. R. Sweeney for rubber baby spoons. It displays, protects, adds sales appeal . . . automatic sealing assembly.



A luxurious "quonset" style acetate box designed for Modern Forge Mfg. Co., Inc. added glamour to the merchandise, created new interest, skyrocketed sales.



A novel idea in packaging carbide tips introduced by Vascoloy-Ramet Corp. pointed to the versatility of the "slide-pack". Protects individual parts, permits easy identification and selection.

We invite your inquiries on your packaging problems

Plastic Container Division

Plastofilm INC.

916 WEST UNION AVENUE, P. O. BOX 331, WHEATON, ILLINOIS

REPRESENTATIVES IN ALL PRINCIPAL CITIES

improve machine-handling characteristics. Films with a density of about 0.950 have approximately 3½ times the stiffness of the medium density films (0.930) now on the market (see chart on page 134) and this stiffness is controllable. Experimental films that are just around the corner from commercial introduction have crispness, sparkle and clarity that closely approach cellophane—and may even come to exceed it.

But increasing the density, while it may make the material easier to "push" through a wrapping machine, will not solve the basic problem of heat sealing polyethylene—because it will still be a thermoplastic material, with essentially the same sealing properties as standard polyethylene now on the market. Also, high-density polyethylene will have a strong, linear orientation, at least at the start. This property reduces tear strength and boosts elongation in the lengthwise dimension of the film. This fact may be a big advantage in simplifying tear-tape openers for overwrapped cartons, but is sure to work against unsupported overwraps such as are used on many soft-goods packages and which are subjected to heavy loading pressures. In addition, the cost of the high-density films will be greater than that of standard polyethylene films at least until full production is reached and development problems are worked out.

Thus the immediate demand for a low-cost, transparent overwrap must be filled with the present commercial polyethylene films. And it is up to suppliers, machine makers and users to work together on remaining handling and sealing problems.

Progress in development of overwrap machinery and what still needs to be done will be explored fully in the next article in this series.

SORRY! Two mechanical slips gave erroneous data in December. In the caption under the price curve on p. 99 of the December issue, a decimal point unfortunately slipped its mooring. The price comparison for 1,000 sq. in. of film should be: for MS-300 cellophane, 3.2 cents; for 1½-mil polyethylene, 2.7 cents. In the film production chart on p. 100, actual and estimated outputs of "other films" (bars marked "O" in chart) should indicate: 1955, 34,000,000 lbs.; 1956, 45,000,000 lbs.; 1957, 52,000,000 lbs.

Tips on tagging

Branching out from its customary role of merely identifying brand and manufacturer, the common tag has now taken on glamorous new uses as a carrier for retail and industrial samples and as an important component of advertisements, displays and promotional and tie-in sales, according to H. E. Rothchild, Rothchild Printing Co., New York.

Examples range from plastic tags containing a sample of detergent that are attached to clothes to emphasize washability and giant blow-ups used as display props, to tags carrying samples of industrial products such as belts and hose.

Foil containers

[*Continued from page 99*]

individually onto a feed conveyor.

Refinements in container manufacture have resulted in rim constructions that provide (1) added protection and strength during packing, shipping and selling, (2) leakproof corners that also prevent damage to overwraps and (3) vertical flanges that permit crimping down over disk covers. Ridged bottoms have been provided for products that need channeling of heated air to all surfaces and perforated bottoms are offered for products that need drainage, such as nursery planters.

Foil lids, of course, may be colorfully printed for brand and product identity. Lids may also be equipped with tearing strips for easy opening. The use of colored (anodized) aluminum containers is also gaining acceptance.

What's ahead

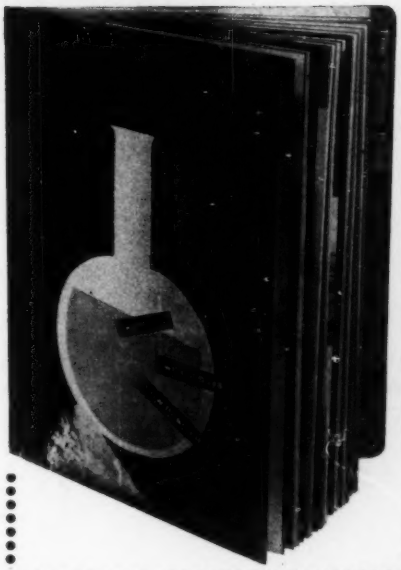
Leaders in the foil industry predict that by far the greatest potential for the disposable foil pan package is in the frozen-food market, where the thermal properties of aluminum—heat conductivity and reflectivity—make it ideal as a "cook-in" container.

They point out that our burgeoning population, desire for more leisure and more wives working will stimulate tremendous expansion of variety and volume of heat-and-eat frozen foods.

They are also talking about:

- Frozen orange-juice concentrates in rectangular, lightweight alumi-

How to figure your sales potential in the plastics field

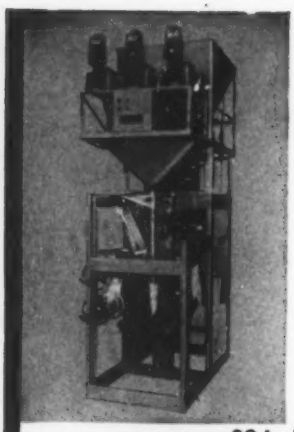


FREE . . . 40-page brochure will help you find answers to your questions about sales opportunities in the fast-growing plastics field.

THIS NEW STUDY contains the inside story of one of America's fastest growing industrial markets. It presents one of the most stimulating and detailed analyses of the plastics field that has yet been published. It's filled with up-to-date figures on the consumption and production of plastics materials, on the field's processing equipment requirements, on potential areas of growth. It lists hundreds of kinds of machines, accessories, chemicals and intermediates, supplies and special services for which the field is manifesting an ever-increasing appetite.

You will find this handsome brochure—file size, lavishly illustrated, 40-pages—a valuable addition to your business library. It may well point the way to increased sales for the industrial products or services that your firm supplies.

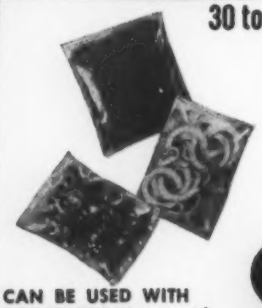
For your free copy of "The Plastics Field," simply address a note on your company letterhead to *Advertising Manager*, Modern Plastics, 575 Madison Avenue, New York 22.



3 Machines in ONE!
VERTI-PAK
forms . . . fills . . . seals . . . bags
AT LOWEST COST!

The lowest priced 3-in-1 packaging machine by far—pays for itself in 1 year or less! Easy to set up, simple to operate, Verti-Pak reduces handling costs, eliminates waste, speeds packaging. Now in use in many leading plants, VERTI-PAK is a profitable investment for the small, as well as large plant!

30 to 50 COMPLETE PACKAGES PER MINUTE!



Verti-Pak is available with auger, volumetric, turret, conveyor and piston feeds and with exact weight scales for packaging almost any product—food products, candy, nuts, dry goods, hardware, toys, plastics, drugs, etc., etc.

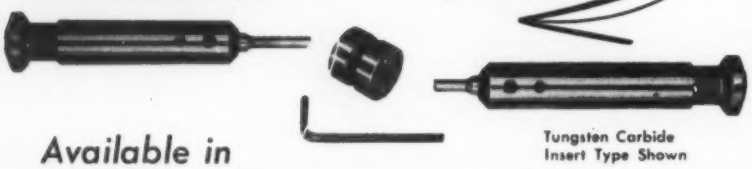
Complete Line of Heat Sealing Equipment
Write for Information

CAN BE USED WITH POLYETHYLENE or with CELLOPHANE AND POLY-CEL!

MERCURY
HEAT SEALING EQUIPMENT CO.
N.E. COR. HOWARD & HUNTINGDON STS.
PHILADELPHIA 33, PENNSYLVANIA

CUT Compacting COSTS!

ELIZABETH
Punches and Dies for Rotary presses



Tungsten Carbide Insert Type Shown

Available in

• TOOL STEEL for normal use
• STAINLESS STEEL for corrosive use
• TUNGSTEN CARBIDE (Insert Type) for abrasive use

Specialization means greater savings to you. All design factors are fully considered—the speed of operation . . . type of press . . proper die clearance . . . punch and die materials and type of material being compacted.

For prompt service with know-how you can depend on . . . Call—

Elizabeth Carbide Die Company, Inc.
5423 Smithfield St., (Boston) McKeesport, Pa.
Telephone: ORchard 8-7735

num packages that will cost less than present cans, will reduce the freight bill, take up less space in warehouses, freezers and the home refrigerator, and can be opened without a can opener.

▶ Stuffed turkey, pre-seasoned roasts and hams packaged in two-piece formed aluminum packages that will serve as roasting pans.

▶ Foods in flat, drawn aluminum containers preserved by low-density atomic radiation. They believe this will be possible because aluminum is no barrier to radioactivity, yet does not become "hot" or radioactive when exposed to radiation.

The fact is that the foil-container industry has been so busy trying to keep up with demand from heat-and-eat foods, it has scarcely had time to look for new applications. The success of Kraft's Party Snack cheese spreads in ribbed foil cups is significant and should point the way for many more straight packaging applications in both foods and non-foods. For this new package form is today's lowest-cost metal container, with all the protection that metal affords, and its potential has obviously barely been tapped.

No want of a nail

[*Continued from page 95*]

the length of the finished packet. This paper strip is discharged through the front of the machine. Here two wedges mounted on the bottom of the "tunnel" supply hopper descend, fold the paper in half and push it into rotary heat sealers. At the same instant, the hopper is opened by a mechanical trip and deposits a charge of nails or tacks into the folded paper.

The rotary sealers form the side seals on the pouch. A bar sealer, mounted between the rolls, cycles around to seal the top of the pouch. The completed package then drops into a butterfly-valve counting hopper that can be pre-set to discharge any number of them into shippers.

A simple crank adjustment on the machine moves the cut-off knife and changes the length of the package. For changes up to ½-in. in length, the sealers need no adjustment. Changes greater than this require a quick realignment of the timing gears on the sealers.

NEW... *Crystal Clear Acetate Film*

WITH ULTRA-VIOLET RAY ABSORBER!

No amber or tango film to haze the attractive, delicate pastel colors of these Dura-soft sponges!

Dura-soft is among the first to use a new Celanese transparent acetate film with an ultra-violet ray absorber that doesn't affect the clarity of the film!

Products with delicate coloring can now gain the packaging advantage of not only light protection, but of full product visibility, too!

Write Celanese in detail about your light protection problems, or use coupon below.

Celanese® PACKAGING FILMS

CELANESE CORPORATION OF AMERICA, Plastics Division, Newark 2, N. J.
Canadian Affiliate: Canadian Chemical Co., Ltd., Montreal, Toronto, Vancouver.
Export Sales: Amcel Co., Inc., and Pan Amcel Co., Inc., 180 Madison Ave., N. Y. 16.

Sales Department, Celanese Corporation of America,
Plastics Division, Dept. 208-A, 744 Broad Street, Newark, N. J.

Please send me complete information on Celanese UV Blocking Film.

Name_____

Title_____

Company_____

Address_____

City_____ State_____

Application I have in mind_____

Classified Advertisements

Employment
Business Opportunities
Used or Resale Equipment

Machinery and Equipment For Sale

NEW JERSEY PONY LABELRITE Machine No. 86 MX-14 MC86000 in very good condition, $950.00.—**M R M UNIVERSAL** 8 Spout Straight Line Filler, good condition. All contact parts stainless steel, $525.00. Available immediately for instant use in your line. Custom Engineering. P.O. Box 2034, Commerce Station, Minneapolis, Minn.

---

1 CELLOPHANE BAG MACHINE. HOLWEG CP-2 GLUED BAG. Fitted with electric eye. Makes gussetted and duplex bags. Minimum width is 2½". Maximum width 12". Minimum length 6". Maximum length 21". Complete with variable speed drive and six (6) former plates. The above machine can be viewed for inspection at any time. **1 CELLOPHANE BAG MACHINE—POTDEVIN.** This machine will make a glued bag with a lip. Type Machine—11OL. Minimum width 2¾" Maximum width 10½". Minimum length 6⅛". Maximum length 13¾". Equipped with six (6) formers. Recently re-conditioned. Complete with magic eye and electric drive. Automatic counter. The above machine may be viewed for inspection at any time. Reply Box 793, Modern Packaging.

FOR SALE—(2) 30" Kidder Cello printers. 4 color. Intercolor drying. Constant tension unwind. Louis Allis constant tension rewind, aluminum unwind and rewind shaft. Scanaweb (one press with motorized register control). Fife web guiding equipment. Range of cylinder and gear. Both fitted with reliance variable. Speed drives. Machines at present in production. Reply Box 794, Modern Packaging.

FOR SALE—Two PO-2 and one PO-5 Roto bag machines for polyethylene, with perforators, and electric eyes. Also Doughboy rotary sealer and conveyor table. Box 789, Modern Packaging.

JUST SECURED — MODERN WRAPPING MACHINES. Available at Fraction of New Cost. 4—Scandia Practically New Automatic Cellophane Wrapping Machines, Model SF-6F, with electric eyes. 1—Hayssen Model 10-20 Wrapping Machine, with electric eye. 2—Pneumatic Scale Co. Cartoning Units, consisting of Automatic Carton Feeders, Bottom Sealers and Top Sealers. 1—Hayssen Compak Model F, Low Frame, Adjustable Bag Making, Filling and Closing Machine, 4 Tube Construction, Electric Eye, Volumetric Feed. 140 packages per minute. 1—Ceco Model 40-9-1/2-TT Adjustable Cartoner. 1—Package Machinery Model FA 2 Wrapper with Electric Eye. Serial No. 24,505, with belt infeed, overhead carriage and compression unit. Tell us your Requirements. Write, Wire, Phone Collect. Union Standard Equipment Company, 318-322 Lafayette Street, New York 12, N. Y.

FOR SALE—30,000 Calmar sprayers with 5¾" rigid tube and 1" screw top at an interesting price. Westley Industries, Inc., 1898 Scranton Road, Cleveland 13, O.

FOR SALE—587,000 lineal feet Saran film SA-517, 100 gauge. All material on 3" I.D. metal cores, ¼" wall. Lot is composed of 24 rolls 26⅛" wide (225,525 lineal feet), 14 rolls 21⅛" wide (117,600 lineal feet), and 29 rolls 30¼" wide (243,900 lineal feet). Price .055 per thousand square inches, delivered. L. Mayer, Orchard Paper Company, 3914 N. Union, St. Louis 15, Mo.

FOR SALE—SARA Band Sealer for polyethylene, cellophane, pliofilm, vinyl. Guaranteed for any material that is heat sealable. Record Chemical Co. Inc., 486, St. John Street Montreal, Quebec. VI 9-8819, VI 9-8590.

SALE—PLASTIC VIALS: Excess inventory, 110,000 virgin clear flexible cellulose acetate thin wall shell vials with red polystyrene bottoms and caps. ¾ in. diameter, 1¼ in. body length, overall length (cap on) 1⅜ inches. Price $950.00 for quick sale. Write, wire, phone collect H & K Sales Company, 4505 State Line, Kansas City, Missouri.

Help Wanted

PACKAGE ENGINEER & DESIGNER WANTED—Multi corrugated box plant located on the eastern seaboard in the vicinity of New York offers excellent opportunity to right party. You will be given top position in this department of our organization if chosen. All replies confidential. Box 785, Modern Packaging.

PACKAGING PERSONNEL
Positions Filled and Secured. A Confidential Nationwide Service for employers seeking personnel and individuals seeking new positions. Inquiries invited. Reply to Graphic Arts Employment Service, Est. 1952, Helen M. Winters, Manager; Dept. PAC-12, 307 East 4th Street, Cincinnati 2, Ohio. Phone CHerry 1-2202.

SALES MANAGER—To integrate and expand sales of established medium size flexographic printer and fabricator. Aggressiveness required with management responsibility and planning. Plant proximate to Cleveland. Top salary, bonus with possible stock option. All replies in strictest confidence. Box 787, Modern Packaging.

CHEMIST INKS & LACQUERS: Chemist experienced in one or more of the following fields relating to the manufacture of flexible packaging materials: aqueous adhesives, thermoplastic adhesive, rotogravure INKS AND LACQUERS, aluminum foil, paper and plastic films. Age 27-35. Southeastern U. S. Replies confidential. Write full details on education, experience, Box 796, Modern Packaging.

YOUNG MARKETING EXECUTIVE—National flexible packaging manufacturer has immediate opening for qualified person. Must be experienced in merchandising, sales promotion and/or direct sales in packaging or food manufacturing. Excellent salary commensurate with qualifications. Box 798, Modern Packaging.

SALESMAN AND SALES REPRESENTATIVE WANTED—New product with enormous potential in the packaging field about to be introduced on a national scale. Personnel needed with experience and contacts selling to foil and film accounts in the packaging trade. Send resume and salary requirements. Address all inquiries to Box 799, Modern Packaging.

LABEL and TAG SALES: If you sell PRINTING-ADVERTISING or related products or services we have available key city territories to sell nationally-advertised line of labels and tags. Right man can build high earnings, assured income. Excellent potential. Strong promotional backing. Full or part time. Reply Box 790, Modern Packaging.

FLEXIBLE PACKAGING SALESMAN
Who has sold cellophane, foil overwraps, etc. Headquarters in Chicago; will do some travelling. Salary plus expenses. Fine opportunity. Please send complete resume and salary requirements. Reply Box 786, Modern Packaging.

RETIRED EXECUTIVES (or active Packaging Materials Salesmen): Stimulate interest in our specialized service (we sell no products) with your contacts. If they show interest, we do presentation and work. Commission. Three introductions paid one representative $5,800. Must have presidential contacts among consumer-goods manufacturers (especially groceries). Interview any Northeastern city. Box 791, Modern Packaging.

SALES EXECUTIVE WANTED

If on the basis of achievement and realistic consideration you consider yourself to be a creative sales administrator, read on. We have an opening for a person whose background of experience warrants his expectancy of being in top-level management position, but who finds himself in circumstances which make deserving advance impossible for too long a time. The position here will be in top-level management. For a matured and experienced man of achievement it can mean an immediate appointment as Vice President in Charge of Sales; for one whose position made it impossible to manifest such a history of achievement but who has the competency, resourcefulness, and confidence to do so, it will be near such a position. Preferred age range is 35-45.

Who has such an opening? A well established and growing manufacturing concern having multiple plant facilities with a sales distribution which covers the entire United States, Central America, South America, and Canada.

The nature of the task involved at the outset is a position of leadership in top management level for directing sales organization, arranging relations with sales staff that will yield the best results on the national level. The task involves the ability to help a growing sales staff of over 20 men in their everyday efforts, acting in the capacity of a kind of field sales engineer as well as administering the sales staff from the home office and contributing to developing sales efforts and results.

A man with a background in paper experience will be preferred, though the chief desire is for the kind of a person who has willingness and is well motivated in learning the paper industry, has an interest in it, but whose essential competency is in selling, sales management and administration. Remuneration will be based on ability and potential growth.

Direct all replies to Box 792, Modern Packaging, giving full and complete personal history and business and educational background. All replies will be held in strict confidence.

Continued on page 208

SecuRO

THE LATEST R.O. TAMPERPROOF SEAL

★ SECURO SEAL BEFORE FIXING

★ SECURO SEAL FIXED & TAMPER-PROOF... READY FOR TRANSIT

UNIQUE DESIGN OF SECURITY BAND BRINGS ADDITIONAL ADVANTAGES

Hundreds of firms have proved the effectiveness of the R.O. Pilferproof Bottle Closure, and now here is the SecuRO Seal to give even greater security as well as the following advantages.

1 The SecuRO Seal has a right-hand thread and the Security Band a left hand thread making it easy to break the perforated portion.

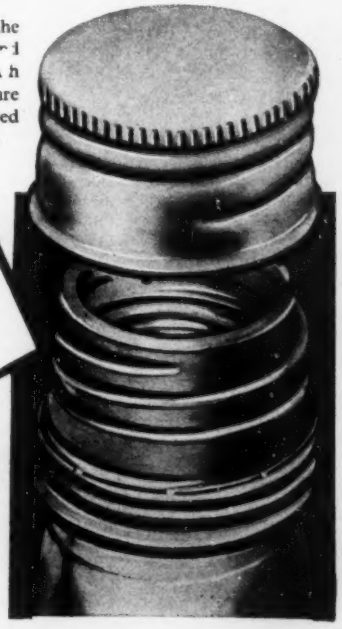
2 The Security Band can be readily unscrewed and disposed of without cutting.

3 The SecuRO Seal is 100% tamperproof.

4 The SecuRO Seal has a greatly enhanced appearance.

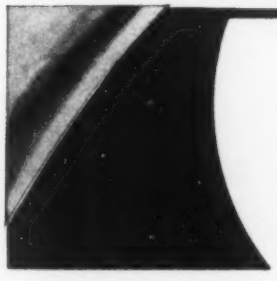
The SecuRO Seal can be applied by any R.O. Sealing Machine suitably adapted. A small change in the glass finish will be necessary but this can easily be effected.

The tell-tale 'click'. When the SecuRO Seal is unscrewed, cap and Security Band part company with an unmistakable 'click' to assure the customer that he has received the contents intact and undiluted.



★ *SECURO SEAL BROKEN BY THE CONSUMER*

But instead of Band dropping down neck of bottle, it remains on thread and may be removed by unscrewing!



METAL CLOSURES LTD

WEST BROMWICH · STAFFORDSHIRE · ENGLAND

LONDON OFFICE: 40 BROOK STREET, LONDON, W.1

Continued from page 206

ENGINEER for industrial paper and film converting company located in new plant in suburbs of midwestern city. Permanent position with a reliable growing concern. You will be in complete charge of machine design, building and maintenance. Diversification of product line insures interesting and challenging work. Good salary, profit sharing bonus and pension plan and stock purchase plan. Please send resume of your experience, education and personal history to Box 797, Modern Packaging.

PACKAGING SPECIALIST—Salaried position now exists for a packaging specialist in our Development Division for the development and evaluation of films and laminations. A technical degree is required with a minimum of two years experience in this field. Permanent location in Akron, Ohio. Liberal company benefits including company paid hospitalization, pension and life insurance plans. Reply should give details of education, work experience, and should include salary required. W. F. Catron, Technical Personnel, Goodyear Tire & Rubber Co., 1144 E. Market St., Akron 16, Ohio.

MANUFACTURER'S REPRESENTATIVE WANTED by plastic packaging division of AAA1 manufacturer. Leading molder of rigid partitioned plastic boxes for packaging applications with extensive line of stock boxes and modern custom molding facilities—requires top flight representation in several prime territories in the Eastern, Southern, Southwestern, and Central states. Advise lines now carried and territory covered in first letter. Reply to The Vichek Tool Co., Plastics Div., Cleveland 4, Ohio.

SEVERAL POSITIONS OPEN for sales correspondents, expeditors with leading flexible packaging manufacturer. Location, Clifton, New Jersey. Expansion of this thirty-year-old multi-plant operation is creating many future opportunities for men selected. Salary dependent on experience. Submit resume, salary requirements to: Personnel Dept., Oneida Paper Products, Inc., 10 Clifton Boulevard, Clifton, New Jersey.

HELP WANTED—ADHESIVE CHEMIST OR ENGINEER: An experienced Chemist or Engineer for development work on the formulation and processing of rubber based adhesives, particularly pressure sensitive type. Must be able to handle development work with a minimum of supervision. Responsibility requires direct contact with production and merchandising. Position is at a modern Research and Development center 40 miles from New York City in a rural New Jersey area. Send resume of qualifications and experience to: Johns-Manville Research Center, Manville, New Jersey, Attention: Technical Personnel Manager.

Situations Wanted

PACKAGING SPECIALIST—Energetic, creative executive. 15 years experience industrial and consumer packaging: design, production, marketing. Active in product development. Thoroughly versed in converting operations of flexible packaging materials. Seeking administrative opportunity where fresh packaging ideas can be utilized. Reply Box 795, Modern Packaging.

Miscellaneous

EUROPEAN MANUFACTURER of quality self-adhesive tapes e.g. cellulose and vinyl wants to contact companies all over the world interested in selling tapes. Special wishes re lengths, widths and put-up are attended to. Manufacturing licenses are also available in some countries. Reply Box 784, Modern Packaging.

ADDITIONAL PACKAGE SOURCES NEEDED: Expanding package sales organization particularly needs sources for specialized folding boxes and transparent packagings. We are well rated commission operatives selling the package custom in Pittsburgh for over fifteen years. Sales last year exceeded $500,000.00. If you are the manufacturer of outstanding consumer goods packagings, and are interested in business from the Pittsburgh territory, please write in confidence to Box 788, Modern Packaging.

BUSINESS OPPORTUNITY—Small Polyethylene Bag plant with latest converting and printing equipment located in deep SOUTH. Operating with experienced personnel and established repeat business. Nonresident owners will consider offers. AECO Investment Company, Box 1267, Atlanta 1, Ga.

ALL CLASSIFIED ADVERTISEMENTS PAYABLE IN ADVANCE OF PUBLICATION
NEW RATES: EFFECTIVE MARCH ISSUE
Closing date: 10th of preceding month, e.g., February 10th for March issue.
Per inch (or fraction) ..... $20.00. Each 3 inches or fraction (boxed) $10.00 extra.
For purposes of establishing rate, figure approximately 50-55 words per inch.
Address all communications to Classified Advertising Department,
Modern Packaging, 575 Madison Avenue, N. Y. 22, N. Y.
Modern Packaging reserves the right to accept, reject or censor classified copy.

UNSCRAMBLER SPEEDS UP PRODUCTION

● Cartons or cases of bottles, jars, or cans dumped on table are instantly unscrambled and regimented into a single file to keep a continuous flow of units on your production line. Reduces labor costs . . . minimizes breakage . . . saves floor space . . . and meets all sanitary specifications as operator does not handle mouths of units.

GET THE FACTS NOW!

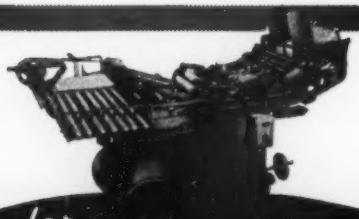
ARE YOU CHANGING TO GLASS?

Send for Bulletin ST-1 and learn why there are twice as many ISLAND Styl-O-Matic Unscramblers in use than all other makes combined, and how they are used to unscramble practically every type of container imaginable.

ISLAND EQUIPMENT CORP.
27-01 Bridge Plaza North
Long Island City 1, N. Y.

Please send full details on the Styl-O-Matic Unscrambling Tables as described in Bulletin MP-1.

NAME_____
ADDRESS_____
CITY_____ STATE_____



for **IMPRINTING** CODING

THE MULTIPRESS

MARKINGS OF PRINTING-PRESS-QUALITY ON

FOLDED CARTONS • LABELS • MATERIALS • PAPER PRODUCTS • BAGS • ADVERTISING LITERATURE • FLAT CONTAINERS

IMPRINTING

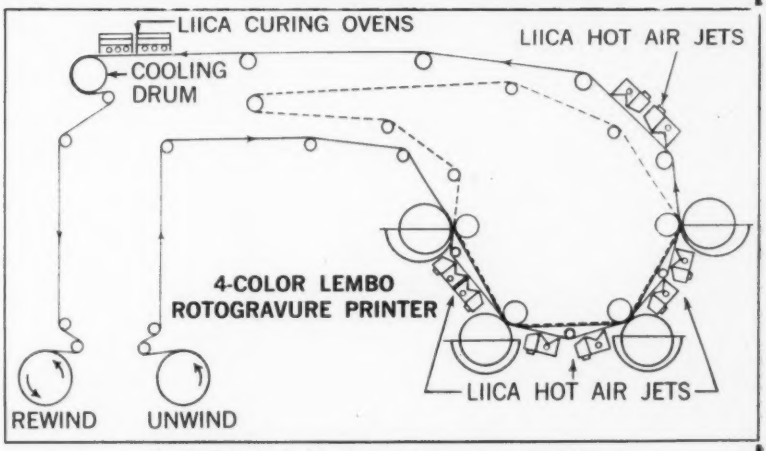
LOT NUMBERS • DATES • FLAVORS • SIZES • PRICES • CONTENTS • COLORS • STYLES • CATALOG NUMBERS • BLOCKOUTS • DEALER IMPRINTING

CONSULT VERNER ON IMPRINTING PROBLEMS

B. VERNER & CO., INC.
52 DUANE STREET, NEW YORK 7, N.Y. BA7-1466-7

Print plastic film 100% faster!

Equip your *ROTOGRAVURE* PRINTERS with the **LIICA FAR INFRARED DRYING SYSTEM**



Typical installation in a rotogravure machine

Consult us freely on all your drying problems. We will be happy to help you increase speed, improve quality, save work, space and money, and prevent waste also in FLEXOGRAPHIC PRINTERS, COATERS and all other CONVERTING MACHINES.

COMAC, Converters Machine Co. 22 West Putnam Avenue Greenwich, Connecticut

Canadian Representative **Gustav A. Langen** 104 Southvale Drive Toronto 17, Canada

Send for the *WILSOLITE* technical man!

You are always looking for the newest improvement, especially in a new art like printing with flexible materials. Send for the Wilsolite man when you have a technical problem; keep in touch with him as the source of information on printing progress. Wilsolite Technical Bulletins on Engraving Rubber Plates, Liquid Plastic Plates, Bakelite Materials and related subjects offer valuable information. Write to Wilsolite for help on your technical problems.

Rely on *WILSOLITE* for the best quality in supplies and materials.
We feature

GOODYEAR
Natural and synthetic rubber for molding and engraving.

WILSOLITE
Matrix materials; fill-in powders, embossing sheets.

ASK YOUR COMMERCIAL PLATE MAKER! He is an expert in working with Wilsolite flexible materials.

WILSOLITE CORPORATION
1827 Niagara Street, Buffalo 7, New York
CANADIAN AFFILIATES: Toronto, Ont. • Fort Erie, Ont. • Vancouver, B. C.
WAREHOUSES: Buffalo • Hackensack • Pensacola • Denver • Los Angeles • San Francisco • Seattle

Index to Advertisers

Distribution of this issue: 25,000

166 Acme Gravure Services, Inc.
48 Acme Steel Company
164, 165 Allied Chemical & Dye Corporation, General Chemical Division
27 American Can Company
194, 195 Bradley Container Corporation, A Subsidiary
200 American Evatype Corporation
136 American Flange & Manufacturing Co., Inc.
184 Amsco Packaging Machinery, Inc.
22, 23 Armour and Company, Adhesive Division
10 Armstrong Cork Co., Glass and Closure Division
183 Atlas Coatings Corporation

31-33 Bakelite Company, Division of Union Carbide Corporation
26 Baldwin-Lima-Hamilton, Hamilton Division
34 Bartelt Engineering Co.
72 Battle Creek Packaging Machines, Inc.
36 Beck, Charles Machine Corporation
61 Bensing Bros. & Deeney
58 Bliss, E. W., Company, Can Machinery Division
194, 195 Bradley Container Corporation, A Subsidiary of American Can Company
21 Brown Company
129 Burt, F. N., Company, Inc.

202 Cameo Die and Label Company
156 Carey Press Corp.
80, 81, 205 Celanese Corporation of America, Plastics Division
145 Champlain Company, Inc.
160 Claremont Flock Corporation
76, 77 Clark, J. L., Manufacturing Co.
206, 208 Classified
79 Cleveland Container Company, The
39 Conapac Corporation, Roto Bag Machine Corp. Division
180 Consolidated Packaging Machinery Corp.
53 Container Equipment Corporation
Back Cover Continental Can Company
209 Converters Machine Co.
7 Crown Cork & Seal Company, Inc. Can Division
Crown Zellerbach Corporation
49 Western-Waxide Specialty Packaging Division
163 Gaylord Container Corporation

168 Darling & Company, Glue Division
173 Davidson Corporation
35 Davis, Joseph, Plastics Co.
25 Diamond Plastic Box
172 Dillon-Beck Manufacturing Co.
5 Dobeckmun Company, The, A Division of the Dow Chemical Company
47 Doughboy Industries, Inc., Mechanical Division
52 Dow Chemical Company, The
du Pont de Nemours, E. I., & Co., (Inc.)
64, 65 Film Dept., Cellophane
73 Grasselli Ludox
183 Dusenbery, John, Co., Inc.

159 Eastman Kodak Company, Cellulose Products Division
204 Elizabeth Carbide Die Company, Inc.

62 Ferguson, J. L., Company
28 Fisher's Foils Limited
37 Flex-O-Glass, Inc.
68 Food Machinery and Chemical Corporation, Canning Machinery Division
6A & B Forsman, C. H., Company
156 Frank, Walter, Organization, The
166 Fry, George H., Company

163 Gaylord Container Corporation, Division of Crown Zellerbach Corporation
153 General Corrugated Machinery Co., Inc.
15 Gibbs Automatic Moulding Corporation
169 Gilman Paper Company
198 Gisholt Machine Company
1 Goodyear Tire & Rubber Co., The Packaging Films Dept.
187 Growers Container Corporation

150 H & H Products
153 Hamersley Mfg. Co., The
26 Hamilton Division, Baldwin-Lima-Hamilton
199 Hansella-Werke Albert Henkel A. G.
6 Harcord Manufacturing Co., Inc.
183 Harkin Affiliates, Inc.
167 Hayssen Manufacturing Company
190 Heinrich, H. H., Company
155 Hinde & Dauch, Subsidiary of West Virginia Pulp & Paper Company

162 Injection Molders Supply Company
212 Inta-Roto Machine Co., Inc.
19 Interchemical Corporation, Finishes Division
185 International Filling Machine Corporation
51 International Staple & Machine Company
208 Island Equipment Corp.

188 Kennedy Car Liner and Bag Co., Inc.
135 Keyes Fibre Company
46 Kidder Press Co., Inc.
201 Kimball, A., Co.
54, 55 Kimberly-Clark Corporation

201 Lermer Plastics, Inc.
40 Lynch Robo Corporation, A Division of Lynch Corporation

150 Mack Molding Company, Inc.
179 Markem Machine Company
160 Martin, Andrew M., Co.
175 Maryland Glass Corp.
179 Matthews, Jas. H., & Co.
211 Mercury Engineering Corporation
204 Mercury Heat Sealing Equipment Co.
207 Metal Closures Ltd.
Inside Back Cover Michigan Carton Co.
67 Milprint Inc.
78 Minnesota Mining and Manufacturing Co., Chemical Products Group

84 Nashua Corporation
9 National Can Corporation
63 National Metal Edge Box Co.
Inside Front Cover National Starch Products Inc.
74 New Era Manufacturing Co.
57 New Jersey Machine Corporation
162 Niemand Industries, Inc.
71 Nixon Nitration Works

143 Olin Mathieson Chemical Corp., Film Division
122, 123 Owens-Illinois

(*Continued on page* 212)

SINCE 1933

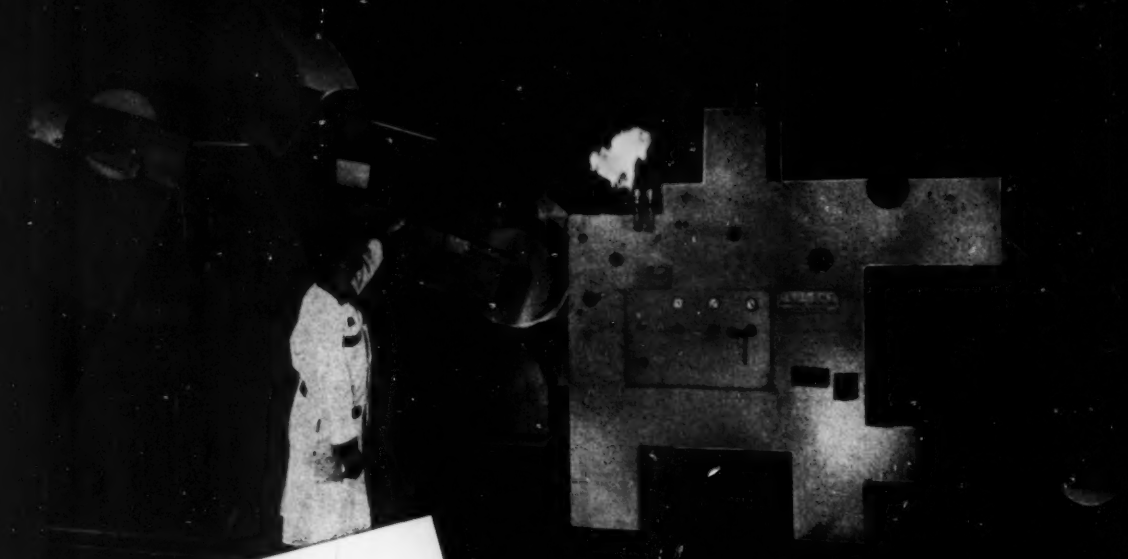
A Symbol of fine CRAFTSMANSHIP

MERCURY MACHINES — PACE SETTERS FOR THE FOLDING CARTON INDUSTRY

NOW! *Practical* for the first time!

CONTINUOUS OPERATION

— on web-fed Printing and Converting



Brand New Mark W-7 Automatic Continuous REWINDER

Offers

AUTOMATIC TRANSFER . . . from Loaded to Empty Core

- Up to 84" roll diameter
- Constant tension rewind at any desired tension
- Fluid power drive
- Shaftless center wind design
- Will operate in line with your printing or converting equipment

Winding speeds up to 1000 feet per minute
Transfer speeds up to 400 feet per minute
Paper or boxboard up to 50 points

Profit Producing Machinery for Paper Converters

ENGINEERING CORPORATION

2100 N. Farwell Avenue • Milwaukee 2, Wis., U. S. A.

(*Continued from page* 210)

193 Package Machinery Company
45 Package Products Co., Inc.
214 Paisley Products Inc., a Morningstar, Nicol, Inc. Subsidiary
18 Paper Converting Machine Co.
186 Perl Machine Mfg. Co., Inc.
56 Permacel-Lepage's Inc.
173 Peter Partition Corp.
157 Peters Machinery Company
189 Phillips Petroleum Company, Plastic Sales Division
181 Plastic Artisans, Inc.
150 Plas-Ties Company
202 Plastofilm Inc., Plastic Container Division
158 Plaxall, Inc.
30 Pneumatic Scale Corp., Ltd.
198 Potdevin Machine Co.
188 Precise Engineering Co., The
171 Precision Valve Corporation
3 Redington, F. B., Co.
174 Resina Automatic Machinery Co., Inc.
12, 13 Reynolds Metals Company
8 Riegel Paper Corporation
69 Risdon Manufacturing Company, The, Valve Division
39 Roto Bag Machine Corp., Division of Conapac Corporation
59 Rotogravure Packaging Inc.
70 Rowell, E. N., Co., Inc.
177 Sheffield Tube Corporation, The
82 Star Aluminum Company Limited
83 Steigerwald, A. M., Co.
149 Swift & Company, Adhesive Products Dept.
182 Tension Envelope Corp.
11 Tri-State Plastic Molding Co.
Union Carbide Corporation,
31-33 Bakelite Company Division
147 Visking Company Division
150A-D Union Carbide International Company
161 U. S. Automatic Box Machinery Co., Inc.
198 U. S. Bottlers Machinery Co.
208 Verner, B., & Co., Inc.
147 Visking Company, Division of Union Carbide Corporation
75 Wagner Iron Works
186 West Engineering Company, Inc.
16,17,196, 197 West Virginia Pulp & Paper Co. Hinde & Dauch, a Subsidiary
155 Western-Waxide Specialty Packaging Division, Crown Zellerbach Corporation
49 Wheeling Stamping Co.
60 Wilsolite Corp.
209 Wirz, A. H., Inc.
38 Wood Flong Corporation
24 Wrap-Ade Machine Co., Inc.
181 Wright Machinery Company, Division of Sperry Rand Corporation
29 Zumbiel, C. W., Co., The

MODERN PACKAGING

A BRESKIN Publication

Published by Modern Packaging Corp., 575 Madison Avenue, New York 22, N.Y.

LIKE THIS

Salt and Pepper

ON YOUR

FOOD.....

Zumbiel creative packaging can produce that *most wanted* flavor in your marketing program—the flavor of greater volume and increased profits. May we—without obligation—submit "sales-flavored" design ideas, and cost estimates.

Creators of "Sell-Inspired" packages for 81 years

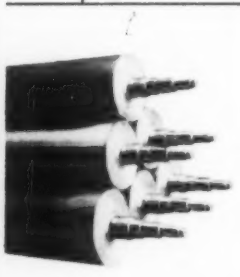
THE C. W. ZUMBIEL CO.

2339 Harris Ave. Cincinnati 12, Ohio

Established 1876

"Roll 'em!"

Take the wrinkles out of foil, film and paper with our HERRINGBONE ROLLS.



Precision rolls by Inta-Roto . . . precisely engineered, precisely ground . . . keep your work **flowing.**

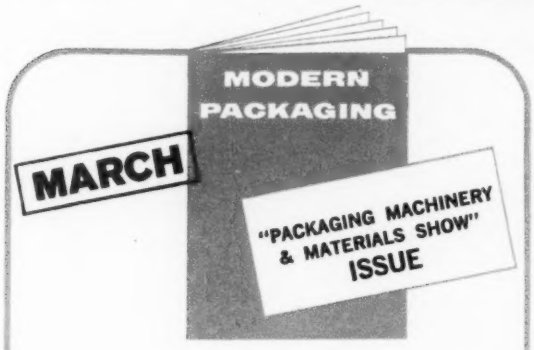
Gravure base cylinders, herringbone, spiral type heating or cooling and other rolls to exact specifications. Write or call:

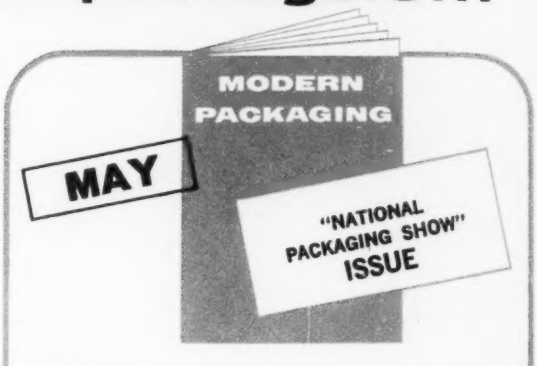
INTA-ROTO
MACHINE COMPANY, INC.

P. O. Box 454, Byrd Airport, Richmond 3, Va.

Teletype: RH 435
Phone: REpublic 7-4181

In '58 two great opportunities to sell to packagers...





Facts about the Shows...

The Packaging Machinery and Materials Show is sponsored by the Packaging Machinery Manufacturers Institute, one of the packaging field's oldest and most influential trade organizations.

The '58 Show will be held in the Atlantic City Auditorium for four days, March 25-28. A new biennial packaging event of national scope—the first PMMI Show was a smash success in Cleveland in 1956—it aims to concentrate on the technical, mechanical and production phases of packaging as against merchandising aspects.

Sponsored by the American Management Association, the annual National Packaging Exposition is the oldest, largest (and until 1956 was the *only*) national packaging show.

The '58 Show—27th in the long series—will occupy the New York Coliseum for five days, May 26-30, in its first appearance in New York City in fourteen years. One of America's largest industrial expositions, its ocurrence traditionally marks the high point of the year for packagers throughout the country.

...about the Issues

The March issue will carry a *complete* Exposition guide: floor plan, roster of exhibitors, schedules of all meetings and activities, feature articles and news keyed directly to readers' show-time interests; augmented coverage of new developments which suppliers regularly "time" for release to coincide with the Show.

Same as for March issue.

...about Packaging Show Audiences

The businessmen who visit these events constitute a screened group of top-flight customers and prospects for suppliers of containers, packaging materials, and packaging equipment.

At *seven* of these major conventions since 1952, leading research organizations have conducted on-the-spot interviews with these visitors. Their published findings (we will be glad to send you verbatim copies of each report) show that Modern Packaging is a consistent *first choice* among them—with greater *coverage*, greater *readership*, and greater *editorial value* than any of the other packaging publications mentioned.

At the recent 1957 National Packaging Show, for instance, John T. Fosdick Associates, New York, who made the study, concluded that, in comparison with the second-place magazine, MODERN PACKAGING had a 3-to-2 lead in coverage; a 5-to-3 edge in regular readership; and a 2½-to-1 margin as the one "most useful" packaging periodical.

...about "Show" Issue Advertising Values

Your advertising in these issues serves *four* specialized functions that cannot be performed in regular issues:

(1) During the "pre-Show" period, March and May issue ads help to stimulate interest in, and attendance at, the booths of exhibitors. (Each of the issues is scheduled to be in the hands of its 24,500 packager-readers about 10 days *before* the Show it features.)

(2) During the Shows, this advertising gets further readership by packagers who use the Show issues to plan their Show-time activities.

(3) Because these issues are literally "Expositions in Print", they serve their readers as post-Show "exhibition booths" . . . as reminders of products that were actually on display. Advertisements by non-exhibitors enable such companies to vie with firms which were represented at the Show—and at a time when many buying decisions are being made.

(4) A significant extra value of "Show" issue advertising lies in its ability to reach the many packagers who are *unable* to attend the Shows.

...about Rates and Closing Dates

Copy requiring proofs for okay due February 5th.
Complete plates due February 10th.
Regular advertising rates apply.

Copy requiring proofs for okay due April 5th.
Complete plates due April 10th.
Regular advertising rates apply.

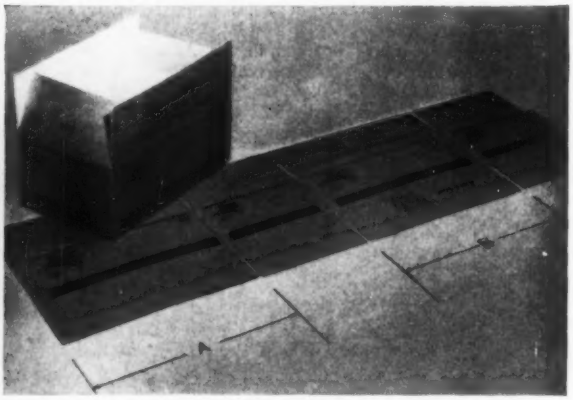
RESERVE ADVERTISING SPACE IN BOTH ISSUES NOW!

"Stop-Slip" Sprayed Shipping Cases Answer Dual Problem Of "In-Plant" Handling and "Over-the-Road" Shipments

HANDLING TEST "A".. Operator has braked sharply at 5 mph down a 5% grade. Treated cases did not move more than 3 inches.

HANDLING TEST "B", same as "A".. of the identical load of *untreated* cases, nine boxes were thrown to the dock.

APPLICATION of Paisley "Stop-Slip" Spray Coating being done at the container plant as corrugated blank reaches discharge belt of printer-slotter.



SPRAY PATTERN of Paisley "Stop-Slip" invisible Coating covers only sections "A" and "B". Material may be applied directly over wet ink on the corrugated blank without adverse effect.

Can Be Applied By Fibre Box Manufacturers or By The Shipper.. Eliminates Need of Strapping, Banding or Gluing Pallets

A quick, easy, automatic application of Paisley "Stop-Slip" sprayed Coating #1715 can be applied by the case manufacturer at the printer-slotter, or by the shipper at the end of his automatic case sealer. This instant-drying treatment materially reduces in-plant handling and shipping damages, which have resulted from the normal poor dynamic stability of untreated containers.

Paisley "Stop-Slip" not only reduces damage in handling; but, enables you to use a highly finished corrugated board for better printing; without increased stacking and shipping problems.

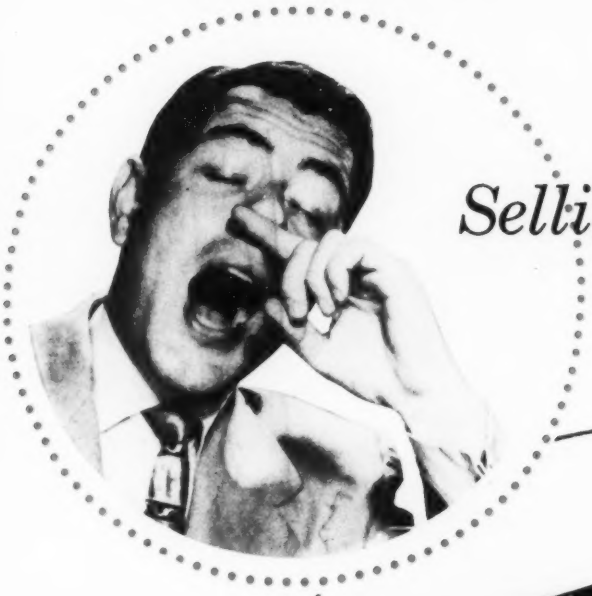
This light, invisible, economical Coating effectively reduces natural container slipperiness without harming its appearance.

Every corrugated box manufacturer and shipper should investigate the advantages of the Paisley "Stop-Slip" treatment. Phone or write today for technical information and assistance.

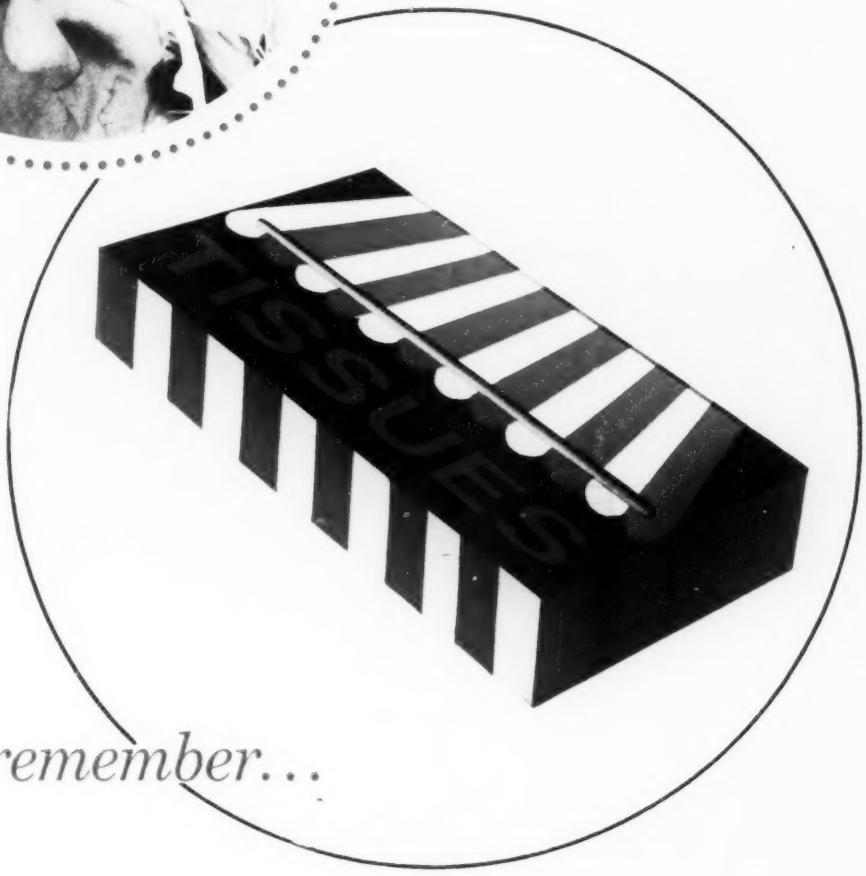
Paisley® SCIENTIFIC ADHESIVE SERVICE

PAISLEY PRODUCTS INC. A MORNINGSTAR, NICOL, INC. SUBSIDIARY

630 W. 51st Street, New York 19, N.Y. • 1770 Canalport Ave., Chicago 16, Illinois. Headquarters for Glues, Pastes, Resin Emulsions, Latex Cements & Related Chemical Products for all Packaging, Labeling and Industrial Manufacturing Operations. Plants: New York • Chicago • St. Louis • Los Angeles • San Francisco. Offices in all principal cities. In Canada: Morningstar-Paisley of Canada, Ltd., Toronto.



Selling paper products?



Then remember...

...America reaches for MICHIGAN Cartons!

YOU *can rely on helpful personal service from your Michigan Carton salesman*

MICHIGAN CARTON CO. MC **BATTLE CREEK, MICHIGAN**

CANS WITH EXTRA SALES-APPEAL . . .

All the way around

Reflect for a moment on the picture above: six major brands of sweet-smelling talc. They've all made use of the sweet, selling advantages in Continental's specialty cans. There's plenty of room for directions, sales messages and information—all around the package. Plenty of room for unusual decorative effects—with no break in the design. We can give *your* product this same sales-appeal; Continental specialty cans are available in a technicolored variety of shapes and sizes. Call on us for details—soon.

Here's what happens: every angle of a Continental specialty can is lovely. The reason: our fine, expert lithography. Wide range of colors. Unlimited design possibilities.

QUALITY Continental SERVICE

CONTINENTAL CAN COMPANY

Eastern Division: 100 E. 42nd St., New York 17
Central Division: 135 So. La Salle St., Chicago 3
Pacific Division: Russ Building, San Francisco 4